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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Extirpation of an Abdominal Tumor of large size. By DANIEL BRAINARD, M.D., Professor of Surgery in Rush Medical College, Attending Surgeon of the Chicago Hospital, &c.

John Meaten, Æt. 38 years, an Englishman, gardener, entered the hospital, April 5th, 1847, on account of a secondary venereal affection of the skin and a suppurating gland in the groin. His constitution had been greatly impaired by disease and remedies employed against it, although his general health was tolerably good. In addition to the syphilitic affection, he labored under a complication of surgical diseases which rendered his case one of much interest. He had an ancient unreduced dislocation of the left os humeri upon the dorsum of the scapula, and a large tumor of the abdomen. He was treated first for the bubo and constitutional disease; and these having been removed, attention was more particularly directed to the abdominal tumor.

It presented the following appearances: resting upon the right iliac region, it ascended to the right hypochondriac, encroached upon the epigastric, occupied the whole of the umbilical, and terminated upon the edge of the left lumbar region. It projected considerably, and appeared nearly as

large as the head of an adult. Its surface was hard, irregular, and insensible. It appeared to be placed directly against the abdominal wall, was very movable, and could be perfectly circumscribed on every side. It could be pressed upward so as in a great measure to be buried beneath the false ribs to the left side so as to distend the parietes there, and by embracing it upon both sides it could, in a good measure, be lifted from its situation.

Its history, as far as observed by the patient, was as follows: About six months previously, he first perceived it situated midway between the umbilicus and the crest of the right ilium. It was of the size of an orange, hard, insensible, and very movable. Since that time it has regularly increased in size, rapidly of late—fully one-third since his residence in the hospital.

Diagnosis.—In regard to its character and situation, we expressed the opinion that it was fibrous in its texture, and located in the omentum. Its fibrous nature was inferred from its great hardness; its origin and situation were arrived at by the method of exclusion. Thus, it was not difficult to ascertain that it resulted neither from the pelvis, kidney, liver, pancreas, or stomach, from its situation when first observed. It was as easy to infer, with great certainty, that it was not situated in the mesentery or closely connected with the digestive organs; as in either of these cases, it would have shown its effect upon the system by deranging the nutritive action. In short, a careful examination of the case and a consideration of the distinctive signs of the different tumors of the abdomen, and of the diseases of the organs situated in that cavity, were sufficient, as is usually the case, to indicate, with great certainty, the seat and probable nature of the disease.

Treatment.—In reference to this, there was room for more difference of opinion. Should it be left to itself? Should it be removed by operation? These were the alternatives; for medical treatment promised nothing, nor did any surgical means, short of its removal, give better hopes. Its rapid growth preceded the hope of its remaining stationary for a length of time. It must soon encroach upon the viscera and interfere with their action; and it was important that a de-

cision should be arrived at before adhesions and its size should preclude the possibility of relief. It was the patient himself who first seriously entertained thoughts of its extirpation. He was possessed of great firmness, with intelligence and a cheerful temper. After being told that an operation was practicable, although dangerous, he was not urged to or from its adoption; but, after some days reflection, he said that he wished to be operated upon, and that he had selected Monday, May 12th, for its performance.

Operation.—This was accordingly done on the morning of the day, with the assistance of Drs. Maxwell, Blaney, and Huber, and in presence of several physicians and the medical class in attendance upon the Hospital, as follows. The patient was placed upon a table, with the head raised, and was allowed to take a few inhalations of the ethereal vapor, which produced spasmodic action of the muscles of the back which continued for about a minute. (He had tried the inhalation the day before with the happiest effect.) These having subsided, and the tumor being pressed forward by assistants, an incision was made in the linea alba six inches before the umbilicus. The abdominal wall being divided, the omentum was brought into view. and on separating this in the interval of its vessels, the morbid mass exposed. Passing the finger around it, no adhesions were found, and where it was fully circumscribed above, the hands of the assistants still forcing it forwards, the patient made an effort and expelled it suddenly from the abdomen. It was immediately perceived that the pedicle of the tumor was composed of omentum, the vessels of which were thus greatly enlarged. A ligature was passed around it, and the tumor removed; but this was found insufficient, and the arteries to the number of eight were tied separately. The ligatures were cut close, the wound carefully cleansed, and its sides brought together and retained by stitches of interrupted suture and adhesive straps, and a bandage pinned around the body. About eight ounces of blood were lost during the operation, mostly from the first incisions. Including the dressing, the operation lasted about twenty minutes, and was well borne by the patient, who was little depressed by

it, talking cheerfully until it was finished. He was placed in his bed, and a full dose of opium administered.

Evening.—No pain. Pulse 100. Feels well.

May 13th—*Morning.*—Has had hœmorrhage, apparently to the extent of six or eight ounces, during the night. Respiration frequent, with much mucous and sibilant rattle. Pulse 120, weak. Applied a sinapism over the chest; gave mucilaginous drink, with wine and nitre.

May 14th.—Feels much better. Pulse 100. Mucus rattle abundant. Little pain or tension of abdomen. Urine discharged regularly and of natural appearance. Has slept well. Continued counter irritation with a decoction of Senega as expectorant. Diet of soup and gruel, with toast water for drink.

May 15th.—Some reaction. Abdomen fuller and tender. Respiration hurried. Pulse 110. Has slept well. Urine natural. Gave a saline purge, with enemata of ol. ricini and ol. terebinth. aa ʒi with mucilage. Towards evening had stools which relieved the tension.

May 16th.—Has rested well, and taken soup with some relish. Pulse 110, weak. Respiration frequent. Mucous in bronchial tubes accumulating. Abdomen full but soft, and not very tender. Counter irritation and stimulating expectorants continued.

Evening.—Is evidently sinking from accumulation of mucus in the air passages. Wine, with capsicum and external warmth, was made use of. He died on the morning of the 17th; being five days after the operation.

Examination ten hours after Death.—Abdomen little more tumefied than in its natural state. Wound adhered throughout nearly its entire extent. The small intestines near the wound, adhered to the wall and to each other by recently effused lymph. Other parts of the peritoneum presented a healthy appearance. Small intestines, moderately distended with gas, and exhibited considerable vascularity of their coats.

The veins around which ligatures had been placed in connection with the arteries, were of large size, and filled with coagulated blood, but presented internally no trace of inflammation. No hœmorrhage had taken place from the

ligated vessels. Stomach and kidneys healthy. Liver somewhat larger than natural, of a pale yellow color, and fatty feel. The pancreas was dry, firm, and indurated. No morbid growths or other diseased appearances were formed in the abdomen.

The cavities of the right side of the heart were distended with fibrinous concretions of extreme tenacity. The air cells were distended with serum, which flowed freely when they were cut. The right lung was extensively adherent by its pleura to the thoracic wall, and at the line of junction of the upper and lower lobes there was a spot about two inches in diameter, of a dark brown color, and entirely destitute of tenacity, being incapable of resisting the slightest touch. Both lungs were crepitant throughout.

The muscles of the entire system were firm, and in many places partially transformed to fibrous tissue. The tendons were thickened, rough, and adherent; and to the ligaments of the articulations at several points, were found indurated fibrous masses sufficient to impede materially the movements of the joints. In all the articulations of the hands and feet were found abundant chalky deposits. These affections of the joints, and fibrous and muscular tissues were doubtless the result of the ancient venereal affection.

Examination of the Tumor.—This, in size and form, strikingly resembled the heart of an ox. The base having been directed upward and to the right side. It was hard, irregular, and enveloped in part by omentum. On laying it open it creaked under the knife, was of a light gray color, very vascular at some points, and cartilaginous and bony at others. Along the back part extended an ossified piece, two inches in length, and branched in various directions.

Weight, three pounds ten ounches; length, nine inches; breadth, six inches; circumference, twenty-one inches.

Remarks.—In this case the cause of death seemed to be bronchitis, and the consequent accumulation of serum and mucus in the air cells and tubes. So far as the shock of the operation was concerned, the hœmorrhage, the subsequent reaction and inflammation, with the appearances on dissection, there is nothing to warrant the belief that death would have ensued independently of this complication.

The state of the constitution, enfeebled by disease and medicine was not the most favorable for resisting the effects of severe injury.

ARTICLE II.

The Pathology and Treatment of Periodical Fevers. A paper read before the Rock River Medical Society, May 18th, 1847: By S. G. Armor, M.D., of Rockford, Illinois.

Observations on Medical Topography form a valuable feature of our Western Medical Literature. The effect of atmospheric vicissitude, of peculiar condition of soil and climate, and of the extensive decay of vegetable matter, resulting from the rich alluvial soils of the west, tend to the production of disease differing in type, in symptoms, in pathology, and consequently in treatment, from those of the same general class, as observed by emigrant physicians from the more eastern states. And it is a fact, well known to the profession, that in no forms of febrile diseases have we less extensive and carefully studied pathological observations than those of our periodical fevers of the west. Hence the necessity of the unwearied observations of those who would add to the common stock of this interesting department of our literature.

At an early period fevers were divided, arranged and systematized under various classifications according to the supposed pathology of the disease. Galen first divided into essentials and non-essentials; one a specific disease *per se;* the other sympathetic or symptomatic of the essential form. At this time the doctrines of the solidists were warmly advocated and contested. Pinel, embracing the doctrines of the humoralists, contended, with all the philosophy of the times, that the solids were only secondarily affected; the primary source of the disease being located in the fluids of the body. This was the prevailing opinion of the ancients. At a later day, Stahl published to the world, his theory of plethora, or fulness of vessels, and also a depraved condition of

the fluids, fever being the *vis medicatrix natura*, an effort of nature to get rid of the onus of disease. Hoffman, maintaining the principles of solidism, taught the doctrine of derangement of the nervous system, and spasm of the capillaries. Brown, the father of the Brunonian system, also embracing the doctrines of solidism, supposed that there existed a principle of *excitability*—that a proper amount of this was necessary to the production of healthy action—too much leading to the development of fever. Broussias, enthusiastically considering that *he* had unlocked the great secret, contended that the first impression is made on the mucous membrane of the alimentary canal, and taught his pupils to look upon this as the *primum mobile* and *ultimum moriens* of ALL disease. Louis, repudiating the exclusive doctrines of all preceding theories, contends that the fluids and solids are alike affected, and labors to establish what he calls "reciprocal action" Thus, in the very onset of our investigation, we have a perfect democracy of opinion. Each, caught by the fancied beauty of his theory, has had his 'day of glory'—but has only risen to be again ushered into oblivion. The progress of physiological and pathological science is daily pointing out the errors into which, in their *exclusiveness*, these eminent authors fell; while at the same time we are enriching our medical literature by the many valuable truths which they taught.

I do not purpose, at psesent, to inquire into the character of the agency, or combination of agencies, which give rise to those forms of fever peculiar to the middle, southern and western portions of the Union. As to whether this consists in the specific poison called *malaria;* or, as has been supposed, in the influence of a "moist warm air—air excessively moist considered in connection with its own temperature and the temperature of the human body;" or on "an impaired or deranged condition of the vital functions of the skin;" does not affect my present inquiry. Each or *all* of these causes may have an agency, either directly or indirectly, in the production of our periodical fevers; and by the term *periodical* I include remittent, intermittent, and congestive fevers, which often run into each other by imperceptible

tible gradations, and are, indeed, mere forms or modifications of the same essential disease.

The pathology of these fevers has ever been a vexed question in medicine, both as to the remote cause, and to the primary impression of that cause on the organism. But we have good reason to suppose—in fact all analogies in the pathology of disease tend to show—that the agency, be it what it may, operates primarily on the blood, by changing its normal condition. From an investigation of the great system of nutrition, as connected with animal and organic life, it must appear evident that very many disorders to which "human flesh is heir," consist in morbid alterations in the nutritive process. "Indeed," says Carpenter, in his recent work on physiology, "the progress of physiological research obviously leads to the conclusion, that in every part of the living body there is an inherent and independent vitality which enables it to grow and maintain its normal structure so long as it is supplied with the requisite materials, *and no longer;*" and the tendency which (happily for the progress of medical science) is now gaining ground, to seek in the blood for primary pathological changes, when there is an obvious general disturbance of the system, will doubtless lead to increased knowledge of the real nature of diseased states.

The next question which presents itself, is, what system is it which is principally influenced by the poison of the remote cause when mingled with the blood? That system appears to be the nervous one, and that portion of it especially, which presides over the *organic functions*, and to this pathological feature I wish particularly to direct attention.

I shall observe, for the sake of illustration, the distinction of the *cerebro-spinal* and *ganglionic* systems, so much insisted on by many physiologists, and especially by M. Bracket, in his very ingenious theory of fever. But in making the distinction, we must admit that the cerebral nerves have, to a certain extent, an influence over the organic sensibility; yet it will be at once perceived that this influence is an *indirect* one, because the viscera which perform the organic functions, do not receive their nerves from the brain, but from the ganglions. These ganglia supply the vital or nutritive functions,

and have been, with propriety, considered the aggregate of so many small nervous systems, which are the peculiar centres of the organic life; just as the brain is the great and only centre of the animal life. But while the animal life immediately fails on an interruption of the organic system, the converse of the proposition does not appear to be true to the same extent. Thus fœtuses without heads, *in utero*, possess an active organic life; they are frequently, at the time of birth, monsters in bulk. Many striking and incontestible proofs might be enumerated, of the co-existence of a suspension of the cerebral functions with a permanent action of the organic life. In fact the whole process of absorption, of assimilation, of nutrition, and of the secreting operation in general is effected without any direct dependence upon the animal system. But the inquiry may next arise, as to what relation the organic nerves sustain to the general *perversion* of all these functions. Our answer is: An irritable depressed condition of organic sensibility is the immediate result of a primary pathological condition of the blood; because the system of nutrition being arrested, the natural healthy stimulus of the organic nerves is withdrawn and hence the general functional derangement characteristic of fever. It has been contended, however, by a class of pathologists, and with much apparent plausibility, that the abnormal character of the secretions is not primary and essential, but in reality a *result* of the abnormal state of the blood, from which it is separated, and that the organ itself is still performing a healthy function in separating from the blood that which would be injurious. This proposition is doubtless too extensive and too broad a one. It is easy to conceive, and indeed rational to suppose that derangement of *healthy organic sensibitity* is equally concerned in the production of faulty functional derangement of the secernant system; thus beautifully illustrating the doctrines of "reciprocal action" as taught by Louis. And to this law of relation, with the curative deductions therefrom, our attention should be particularly directed.

All the symptomatology of our periodical fevers, points to an adynamic condition of the nervous system as the most prominent and formidable lesion. Indeed, the very fact of

their *periodical* character throws much light on their pathology, for periodicity is characteristic of diseases of the nervous system. In the examination of a patient, we observe a dry, hot skin, increase of vascular excitement, and general functional derangement of all the secernant system. But these symptoms, it will be borne in mind, are secondary; they have been announced by chill, which is occasioned by impression made on the nervous system. We are led to the conclusion, therefore, that fever, as a *symptom*, is merely reaction from nervous prostration. Break down, from any cause, the nice balance existing between the nervous and vascular systems, and fever always follows. Take, for example, concussion of the brain. First, we have entire prostration of nervous energy, body cold and chilly, secretions measurably suspended; reaction eventually comes on, and fever, thirst, hot skin, dry mouth, in short all the symptoms of fever are present.

Post mortem examinations have frequently pointed out extensive structural lesions in these forms of fever; but the existence of these lesions by no means determined the true and original character of the disease; for the fever may run through its entire course *without* their existence. But if the paroxysms be not promply arrested, it is not strange that local inflammatory action should become speedily developed during the progress of the fever. The harmony of function, and the equal distribution of nervous and vascular excitement are entirely broken up. One organ may be excited, another depressed; the heart and arteries excited, and the muscular system perhaps languid; increased activity of the intestinal exhalents, and diminished activity of the exhalents of the surface; copious secretions from the kidneys, and torpor of the liver. Thus, the proper balance is broken up, the result of which is an excited condition of the entire organism, and frequently the production of local inflammations.

In relation to functional lesions, the liver is found very uniformly complicated; giving, in consequence of the marked disorders of the biliary secretions usually present, the almost universal name of *bilious* to our remittent fevers of the west — a name highly objectionable, if we are to understand thereby that the fever depends essentially upon disease of

the liver, or upon vitiated bile as its proximate cause. The same objection applies to the names cephalitic, gastric, and enteric remittents, for they point out local lesions which are but accidents and consequences of successive paroxysms of congestion and reaction; yet they are unhappily, too frequently mistaken for the original basis of the disease.

Another frequent and often fatal complication, is inflammation of the mucous membrane of the gastro-intestinal canal. Drs. Gerhard and Stewardson have recorded a number of cases which occurred in the Pennsylvania Hospital in the year 1834, and again in the years 1838, 1839, and 1840, in which this lesion was uniformly present; sometimes resulting in melonation, and changes in thickness, consistance, and color, variously combined in different cases; yet in no case was there disease of the elliptical plates, or mesenteric glands, or glands of Peyer and Brunner, occurring in the typhoid fevers of the New England States. It is not strange, however, that gastro-enteric inflammation becomes so frequently a complication in our periodical fevers, for, reasoning *a priori*, and from anatomical structure, this lesion would become readily developed as a secondary pathological condition during the progress of the fever. And the fact should never be lost sight of, that this local phlegmasia is increased by each successive paroxysm. These local inflammations grow out of the pathological condition to which I have alluded. In the first place congestion, or the cold stage, is merely imperfect reaction, and reaction always supposes primary prostration. This broken down condition of nervous energy results from the virulence of the remote cause. The functions of the capillaries being also morbidly impressed, the blood is consequently thrown into the centre of the circulation; and the heart, dependent for its action on nervous energy received from the brain, becomes enfeebled in its action, and the result is engorgement of blood in the portal circle. Having no valves, the hepatic veins and their radicals dispersed through the liver become engorged; the *vena partorum* and its radicals also become congested; then the abdominal viscera fall into a state of congestion; all this resulting from the want of valvular structure and from debility of the right side of the heart. Protracted venous congestion, by the

excitement of distension may become the cause of the active variety. Hence disease of the entire portal circle constitutes the essential anatomical characteristic of our remittent and intermittent fevers.

Finally, as corroborative evidence of the pathological views here presented, an inference may be drawn from the remedies successfully employed in their cure. In intermittent diseases purely neuralgic in character, we resort to those remedies which are anti-periodic and sedative in their effects; and does it not throw light on the true character of periodical fevers that the same remedies, when properly administered, have the like effect in breaking up the chain of morbid action? By the concurrent and almost unanimous testimony of the profession, the preparations of cinchona, variously combined with anodynes, are found to be the most specific in arresting both forms of disease; and it is yet an interesting inquiry as to whether we may not find in other remedies, whose influence is exclusively and almost specifically directed to the nervous system, powerful remedial agents in the cure of intermittent fevers.

If the true theory of periodical fever be such as I have represented it, the indications to be accomplished in their treatment are mainly two. First, to prevent the recurrence of the paroxysms; second, to moderate the violence of the local symptoms, and promote general functional harmony by propar depuratives. I speak here in general terms of those endemic forms of fever peculiar to a western and southern climate, and from the simple intermittent to its more malignant forms, and from the overpowering congestive, seen in the cold plague of the Mississippi, to the symptoms marking the yellow fever of the southern states. Of course the intelligent physician will modify or regulate his treatment according to the type the fever may assume during its progress, or the inflammatory action which may supervene. The fact of the intermittence or periodicity of all these forms of fever is well established; and the thought upon which I insist, with reference to their treatment, is, that in all forms of fever of a paroxysmal character, (and it is only of such that I speak,) the grand, out-standing, prominent idea to be cherished is, to prevent the repitition of paroxysms. In fact

the early and judicious use of quinine, opium, capsicum, and other stimulants and sustenants of the brain and nervous system in our more malignant periodical fevers, before they become complicated with extensive local inflammation, is the very point on which the case is to turn for life or death. And the success of this treatment, in preference to the actual depletory system, is certainly very abundantly established. By it we immediately arrest the paroxysm, and with the arrest of the paroxysm, we generally have an improvement of the symptoms. The pulse, instead of being small, quick, and struggling, becomes fuller, softer, more distinct and natural; the skin assumes a more healthy condition, a free perspiration frequently forming a crisis to the fever; and when followed by proper alteratives, depuratives, tonics, and laxatives, the tongue improves in appearance, the secretions become restored, and the patient rapidly recovers. But if we wait, before adopting this practice, as recommended by a large majority of our most popular authors, until the secretions are restored, the pulse soft, and the febrile symptoms abated, we will wait until struggling nature, unaided, has overcome the disease; or until, in consequence of protracted congestions of organs whose functions are essential to life, inflammation shall have supervened which we may never be able to control.

ARTICLE III.

Observations on Milk Sickness. By Dr. J. H. McNUTT, of Annapolis, Parke County, Indiana.

Much has been written in the form of communications to the various Medical Journals, respecting the disease known as *Milk Sickness* or *Trembles*, by our western practitioners; and some of the papers drawn up evince much careful investigation with regard to that formidable malady that may almost be classed with the opprobria medicinæ, and yet, notwithstanding the ability with which the subject has been handled, very little is known concerning the nature and pa-

thology of this disease, that can be relied on, in a clinical point of view; but, like all other unsettled matters in pathology, each practioner has his own theory from which he draws deductions that, for a time, satisfies his own mind.

To review all the various and discrepant opinions that have been held respecting the cause of milk sickness, would extend this article beyond a practical length. I shall only notice some of them briefly.

I believe the first notice, in the form of a monograph, we have of milk sickness may be found in the Medical and Philosophical Lyceum, page 87, vol. 1st., by Dr. Drake. The symptoms of what he calls a new disease, are in part thus given: "It almost invariably commences with general weakness and lassitude; a strange propensity to sleep occurs. The skin is cool, pale, and frequently affected with clamminess, a disagreeable burning sensation in the stomach and hot evacuations—the thirst is urgent." The above is a very good description of this disease, at that period; and so far as treatment was then concerned it was mostly left in the hands of the nurses.

There have been three theories held in relation to the cause of milk sickness.

1st. That it is propagated by a vegetable poison eaten by our domestic animals, and introduced into the human system by eating the fresh milk or butter.

2d. That it is of atmospheric origin, and governed by the same laws that govern all malarial diseases.

Lastly, that it is a mineral poison, held in solution in the springs in certain localities.

Each of these theories has had its advocates, and I only notice the discrepancy of opinion with regard to the pathology of milk sickness, not for the purpose of entering the arena of controversy, but to stimulate all to the proper investigation. I will merely give my own views, aided by the lights that an experience of some years' practice in a milk sickness region has, from time to time, shed on the obscure subject, however different these views may be from those entertained by Dr. Wright as published in the Western Medical and Physical Journal, or to the mineral hypothesis of Seaton, Taylor, &c. I am indebted to that able pathologist,

Dr. Drake, for much valuable information as to the probable cause of milk sickness. The readers of the Western Medical and Surgical Journal are familiar with his views and as they are in accordance with my own, I more readily refer to them. I assume the ground in the premises that the disease is propagated by a vegetable poison. And here I might enter into a lengthy argumentation of hypothetical reasoning, but in doing so I would only be adding my mite to the many conjectures that run through our medical periodicals. If I can add anything that will be of advantage in a curative point of view, I shall feel satisfied with the effort.

I believe that milk sickness may, with a great deal of propriety, be divided into three stages, viz.: The initial, the febrile, or stage of excitement, and the congestive or stage of collapse, which are characterized by the following symptoms: In the premonitory or forming stage, there is not much disturbance in the circulation; it is nearly normal. There is rather a loathing of food; the thirst is not very great; the eyes show more clearly in this stage what is going on than any other pathognomic means we have. They have a dull heavy appearance as if covered by a pseudo-membranous substance. This stage generally lasts from 24 to 48 hours; and when the proper means are used, the disease may be frequently broken up in limina.

In the stage of excitement, the symptoms are more urgent than in the first stage. There is an increased action in the heart and arteries, with a tendency to coma. The eyes, in addition to the dull and heavy appearance above indicated, show an increased vascularity in all their capillary vessels. There is also a great deal of gastric irritability, with an almost indomitable disposition to retching and vomiting without being able to eject anything from the stomach, except a white glairy matter. There is a peculiar fetor about the breath that is usually developed at this time, which is one of the best diagnostic symptoms we have, and which, of itself, is sufficient to render the disease *sui generis*. This, to one of sensitive olfactories, who is accustomed to the disease, need never be mistaken. As is generally the case when there is gastric irritability there is disturbance in the action of the bowels. Here there is the most obstinate constipation,

which is one of the principal difficulties in a therapeutic point of view. This period in the history of the disease is also characterized by extreme restlessness and jactitation, and what authors term a general feeling of malaise. The thirst is urgent, and the patient loudly calls for cold water which, for a few minutes, seems to be very grateful, and to allay the gastric distress and that intolerable burning sensation in the stomach; but even the water is retained but a short time until it is ejected from the stomach, and an urgent call for more, which is all the patient craves. This stage frequently lasts two or three days without any appreciable difference.

In the congestive or last stage, in addition to the symptoms already detailed, there is cold extremities; the skin has a dark livid and corrugated appearance. The superficial vessels seem collapsed as if entirely empty. The whole surface is covered with a cold clammy sweat. This stage cannot last long until a crisis takes place, either in convalescence, or the patient becoming moribund.

Having thus briefly glanced at the most prominent symptoms characteristic of the disease, I will close by giving what I consider the most efficient treatment; and first the following indications seem naturally to present themselves, viz.: to allay the gastric irritability, and thereby remove obstructions from the bowels; and secondly, restore the balance in the circulation.

The question comes up, what are the means that will best fill these indications? I might here remark that milk sickness is frequently complicated with other diseases. I believe it is a law that governs all diseases, that epidemics have an influence on such diseases as are propagated by local specific causes. Such amalgamation more frequently supervenes when we have milk sickness during the presence of our autumnal fevers. The same order will be observed in giviug the treatment that was had in delivering the symptoms.

In the initial or forming stage, strict dietetic rules should be observed, and the bowels be kept in a soluble condition. Active physical exertion is known by all conversant with the disease to have a prejudicial effect. Hence it is

that cattle bought in a milk sickness region, although apparently healthy when collected, it is no uncommon thing for a number of them to take the trembles on being driven the first few miles.

The next is the stage of excitement; and as the lancet has, for a long time, been regarded as one of the most important curative means in all febrile diseases, the propriety of its use will be briefly considered *a nulla discrimina*.

Depletion with the lancet, in febrile diseases, has obtained and held the empire in medicine too long. Without stopping to inquire what is the grade and variety of fever we are treating, and what are the indications we expect to fill by this sanguinary treatment, I am not of that school who believe it to be reprehensible in all diseases; but we should never bleed where there is fever, guided alone by the simple fact that we have done so before, in some variety of fever, and that, too, with advantage to our patient. Here we have one variety of fever, and that, if not primarily congestive, with at least a strong congestive tendency throughout its course. Now the question comes up, what are the therapeutic means that will best increase the centrifugal action of the heart and arteries? All will give the same response, whether guided by experience or sound pathology. More might be said on the point of the treatment; but since pathology has shed its benign influence on our science, empiricism has fallen before its rational inductions.

Emetics are sometimes highly useful means, especially in that variety that is complicated with our autumnal fevers. Here the treatment might be premised by a mild emetic of pulv. ipecac. to unload the prima via. Having done this, let us dispense with the further use of this class of agents, and the decided preference is given to ipecac. as having less tendency to produce prostration than most other articles of this class.

Cathartics stand at the head of our remedial means; and, as in many other diseases, a proper choice of the articles we use is of the utmost importance. When called to an ordinary case of this disease, if there is much gastric irritability, the first thing is to allay that; and for the purpose twenty or thirty gt. tinc. opii. given in the effervescing

draught, will have a happy effect; or one fourth gr. of the acetate morphia, after which give twenty-five grs. sub-murias hyd. If it should not move the bowels in three or four hours, give at least two ounces ol. ricini, in conjunction with twenty or thirty drops of spirits of turpentine; and if that should be either rejected by the stomach or fail to operate, repeat it at intervals of three or four hours until the bowels are freely moved, assisting by suitable enemata. Much may be done at this stage by perseverance. Let all who have charge of cases of this character reflect that there is here no time for temporising. After having freely evacuated the bowels, the next thing is to keep up the alvine ejections; and this is best done by the frequent administration of castor oil and spirits turpentine, as above indicated.

At this period, the disease frequently passes into the third stage: and here tonics or stimulants are imperiously demanded, and I believe no class of tonics will answer a more valuable purpose than the sulphate of quinia. There is more analogy between milk sickness at this stage and congestive fever than any other disease; so much so, indeed, that some very respectable members of the profession have denied the existence of milk sickness altogether, and treated all such cases as congestive fever.

I cannot better illustrate the happy effects of the sulphate of quinine than by giving the history of the following case:

Mrs. G., aged 30, of strong constitution, was taken rather violently with the milk sickness, accompanied with all the usual symptoms. Was seen by me on the third day after attack, at which time the disease had passed into the second stage. There were some cerebral disturbances; constipation of the bowels, and constant efforts to vomit. Thirst great with considerable general arterial excitement. A large blister was laid over the epigastric region. She was ordered the following: sub-mur. hyd., twenty grains, and to be followed by oleum ricini and spirit. terebinthina. Next day visited her. Her bowels had acted slightly. All the symptoms greatly aggravated. Almost furious delirium. Extremities cold. Patient in the third or congestive stage of the disease. And here I would remark that I regarded the cephalic derangement as more dependent on congestion of the

brain than on inflammatory condition; and, to use a common expression, I must acknowledge that I felt rather stumped.

My patient was evidently sinking. Tonics or stimulants must be used—their use contra-indicated in consequence of the cerebral derangement. I had often thought of the quinine as being a good equalizer, and as admirably calculated to overcome the congestion of the heart and large vessels and here was the case. I ordered the following:

℞.—Pil. Hyd., grs. xii;
Quinia, grs. xxiv;
Mic.—Fiat Pilulæ viii.

One of these to be given every hour until all were taken. These were given through the night; and in the morning I had the gratification of finding my patient improved. Her bowels had been freely moved, bringing away dark bilious evacuations. I ordered mucilaginous drinks through the day, and at night the following, viz.:

℞.—Pil. Hyd. grs. viii;
Sulph. Quinia, grs. xviii;
Mic.—Fiat Pilulæ vi.

Of these, one every two hours, and to be moved off with the castor oil and spirits of turpentine. This treatment was continued until the balance in the circulation was restored; after which the patient was ordered to keep her bowels open with castor oil and turpentine, and a light farinaceous diet.

I have since treated other cases in the same manner, and find the quinine a most valuable adjuvant in filling one indication in the treatment of the disease, viz.: restoring the balance in the circulation, and overcoming congestion.

Blisters are perhaps next in importance in the treatment of this disease. Where there is much disposition to vomit (which is generally the case), their early use is clearly indicated. A large blister should at once be laid over the region of the stomach; and should the extremities become cold, blisters to the ancles and sinapisms to the wrists are indispensable. Enemata are highly useful means in over-

coming the torpor of the bowels which is characteristic of the disease. The bowels are frequently costive from the fœces becoming indurated in the rectum; which may be overcome by the solvent effects of injections. There are other articles that may be used with advantage in the treatment of the disease. The effervescing draught is very grateful, but, as was before remarked, our reliance is to be placed on a few remedies. Such is a brief history of the disease, with what I consider the best treatment hitherto pursued.

ARTICLE IV.

Inflammation of the Brain. By G. N. Fitch, M.D., Professor of Institutes and Practice in Rush Medical College, Chicago.

Among not the least of the difficulties which our profession encounters, is the variation of disease of the same organ in different latitudes, and under the different circumstances of age, constitution, previous habits and the thousand inscrutable ever-varying causes to which we are subjected. These variations form exceptions to any rule, and are often more numerous than the cases under the rule itself. Hence the necessity, if possible, of becoming familiar with all. Many of the exceptions of general occurrence are well known, and so well described in books of practice that a mistake in diagnosis can rarely occur; while others, either from being confined to certain localities or from being less defined in their nature and with symptoms more obscure, escape the observation of standard authors and are left to be detected as best they may be, if at all, by those under whose care they may fall. Such detection, in some cases, and among others in the case of the disease under consideration as it is found here, so far from being aided by the descriptions of standard medical authors, is greatly embarrassed inasmuch as they enumerate groups of symptoms as always present and as necessary to constitute the disease, but

one or two of which are ever found. The presumption, therefore, upon the part of the practitioner, naturally is, that he is dealing with an anomalous disease, instead of one in the treatment of which he would meet with but little embarrassment, did its written history enable him to diagnosticate it. That the disease in question, in the same form under which it not unfrequently prevails here to considerable extent, is not found elsewhere, is scarcely credible. Yet its prevalence to whatever extent in other localities in no manner benefits the profession here so long as the principal source from whence its junior members must derive their information, the books, lend them none but doubtful assistance.

Under the head of "*Inflammation of the Brain*," we include inflammation both of the substance and meninges, making no effort to distinguish between them. Indeed, such effort, even if it were successful, would be attended with no practical benefit, as the treatment, with our present knowledge, would be the same in both cases

We will first briefly examine its *Diagnosis* as given by some of our standard writers when we shall have the advantage of being able to compare the different descriptions with each other and with the disease as it presents itself at the bedside. Several of these descriptions will individually rather embarrass than aid one in his diagnosis, but all collectively may assist in arriving at some conclusion relative to the absence or presence of the disease.

Cullen's synopsis is, "burning fever, pain in the head, redness of the face and eyes, intolerance of light and sound, wakefulness, fierce delirium, or low muttering delirium."

This definition may, for aught we know, be a faithful picture of the disease as it occurs in some rare cases though such cases must be confined mostly to hot climates. Only one of the symptoms thus enumerated has been found uniformly present, viz.: "pain in the head." Eberle gives "synocha, fixed and intense throbbing pain in the head, face full and flushed, eyes inflamed, intolerance of light, hearing at first morbidly acute, and at last almost complete deafness, furious delirium from the commencement, and constant wakefulness."

This is a little enlargement upon Cullen's synopsis, but by

no means an improvement. It is more objectionable than his from which it was evidently mostly borrowed, making "furious delirium from the commencement" a symptom, whereas Cullen does not state when it occurs, leaving it to be inferred that it may take place at any later period of the disease, which is a fact. Of the many cases in our note book not one was accompanied with "furious delirium from the commencement," although occasional transient mild delirium was present in several from an early stage, and in some was the first symptom to attract attention. Goode's definition is the same with Cullen's except fever, which he drops.

Armstrong's diagnosis is worthy more extended notice from its approximating the appearance of the disease, as it has presented itself to us, much nearer than those we have mentioned. He attempts no synopsis, probably from finding none such of general application.

1st. "Some pain, throbbing, or other uneasiness in the head." He proceeds to say that the pain varies according to the duration and intensity of the disease, is more acute when the membranes alone are inflamed than when the substance of the brain alone is affected, and that it is more distinct towards evening. The latter is almost uniformly true. He farther tells us the pain is increased by the erect position, by light, noise, coughing, and shaking the head. All this is strictly in accordance with our observation, except the increase of pain by light, which we have more rarely observed, and which, when present is not so great as that from noise, coughing, or shaking the head. In later stages, the pain is not so much complained of, *if at all*, in consequence of diminished sensibility, or torpor.

2d. "More or less unnatural dropping of one or both eyelids." Once only have we seen this.

3d. "Cornea more glassy or glaring than natural, while at the same time the intellectual faculties are probably duller." We fancy but little reliance is to be placed in these symptoms.

4th. "Pupils contracted, variable, or dilated." "Variable" best expresses the condition of the pupil. Sometimes in the first stage, it is contracted; in other cases it contracts and

dilates alternately, with great rapidity. In later stages it is usually dilated, though not permanently so, unless there is effusion; that is, it will obey the stimulus of light.

5th. "Conjunctiva generally streaked with red." We have noticed this, though not "generally."

6th. "Wakefulness in the first, and heaviness in the last stage." These symptoms occasionally occur, though neither of them is uniformly present. In some cases the heaviness amounts to torpor; in others the patient is merely dull and fretful. When wakefulness is present it is not unfrequently accompanied with great restlessness, as tossing in bed, getting up or otherwise constantly changing posture.

Armstrong makes the mental symptoms—

1st. "Incompetency; an inability to fix the mind on anything or to reason;" and

2d. "Reverie." The last is not unusual; being only occasional, however, in any one case, and generally towards evening.

3d. "Delirium"—but he very correctly adds "delirium seldom occurs in this country [England] before the second, third, or fourth days of the attack." This is precisely our experience in Indiana. Armstrong farther adds—"Delirium does occur, however, in hot countries, at the very outset of the attack." Undoubtedly, and hence the synopsis of Cullen and Eberle, *et id omne genus*, who have copied their descriptions from each other and from tropical writers. He proceeds to enumerate, among other symptoms of the earlier stage, "usual throbbing of the carotid and temporal arteries," increased heat of scalp, face and neck, an irritable stomach or torpid bowels or both. The same remark can be made of these as of his third enumeration of physical symptoms already mentioned.

When a fatal termination is approaching (his second stage) he gives the following as the symptoms, viz.: "Diminution of sensibility." Of one class of cases this is true; the patient becoming more and more heavy until perfectly stupid and insensible. "Pupils first dilated, then immovable." "Patient has a vacant stare or squint." The stare we have often seen, but strabismus is rare in adults. "Pulse first slower then quicker." This change is usually very manifest.

"Subsultus and difficult swallowing." We have never seen the first of these except in cases of long standing, which had assumed a somewhat chronic form, and the second only when a consequence and accompaniment of convulsions. "Convulsions" are likewise mentioned as a symptom of this stage. They are not uncommon in children, but rarely occur in adults, except at a late stage, and indeed in but few cases then.

Mackintosh first gives Cullen's general definition, and adds that after the continuation of these symptoms for a day or two "coma steals on, followed by partial or general convulsions and death." He proceeds: "This case," (a case answering Cullen's definition,) "is the rarest case to be seen in practice," and wonders that Cullen, in drawing out a description of the disease, should have adopted it. In this climate such a case is truly rare, and Cullen's synopsis, so generally adopted and copied, has led to much confusion and malpractice. Mackintosh's description of the disease under the various forms and circumstances under which he has seen it is valuable, as it enables the physician to detect the same morbid affection under entirely dissimilar trains of symptoms.

Doct. Elliotson (Pract. Med.) enumerates as the prominent symptoms, constriction across the forehead, throbbing pain, increased sensibility, *delirium "ferox,"* pyrexia, full, hard, and accelerated pulse.

Doct. Watson, (Pract. Phys.) and Doct. A. Crawford (Cyc. Pract. Med.) give much the same prominent symptoms. All these gentlemen admit variety in their appearance, but aver the above to be most usually present.

We will now describe the disease as it has repeatedly presented itself to us within the last thirteen years, premising only that its usual period of occurrence is during the months of January, February, and March.

The patient complains of headache, generally *quite severe*, in some part of the frontal region; perhaps confined to one spot, as over an eye, or more diffused, and accompanied with a sense of heaviness or fulness in the head. The pain is increased by coughing, sneezing, or sudden motion (shaking) of the head, and by the erect position. In some cases there is a chilly sensation after the pain has continued a longer or

shorter period, followed by its increase. There is very little if any intolerance of light or noise. The nostrils are early found to be unnaturally dry, and the patient complains of their being "stopped up." The appetite not disturbed, though the tongue is slightly coated. The pulse may be somewhat accelerated with other mild feverish symptoms, though as often, perhaps more frequently, the pulse is slower than natural, with increase of fulness. The pain in the head is increased towards evening, becoming sometimes excruciating, with febrile exacerbation. The patient does not sleep well. Towards morning there is a remission of pain and fever, and a disturbed slumber. Hence the disease is not unfrequently mistaken for and treated as a remittent. These symptoms, without any alteration of the pupil, or any delirium, may continue from one to three or four days, the headache rather increasing, but with little change otherwise. The stomach, in some few instances, becomes irritable at an early period of this stage; in others, and the greater number, it is not disturbed at all. After the continuance of the disease thus, for the above mentioned period, if not checked by appropriate treatment, one of two changes manifests itself.

The patient either complains less of pain, becoming drowsy, and the drowsiness gradually increasing to coma; pulse, even if before accelerated, becoming slower; eyes half closed most of the time, and when open staring, but in such manner as to evince want of consciousness; pupil dilated, though still obeying the stimulus of light until a short time prior to the fatal termination, or it may be, until this time, rapidly changeable, alternately contracting and dilating. Unfavorable symptoms increase with more or less rapidity. The coma becomes complete; the pulse again rapid and feeble; the extremities cold; and the patient sinks with or without convulsions.

We said one of two changes occurred—either the above or the headache becomes from bad to worse, until the patient is observed to be delirious—in common parlance, "flighty." The delirium soon becomes furious, with flushed face and wild eyes. The patient struggles incessantly to rise from bed, or to escape from those about him; or he tosses and rolls from side to side of the bed, seldom speaking. These

furious muscular exertions continue until he is completely exhausted, and perhaps dies before his last struggle has fairly ceased; or the struggles become weaker, cease, and are followed by coma of short duration, and death.

In some cases (very few) after the continuance of headache as described, delirium of a milder character supervenes, the patient only occasionally evincing decided delirium. He will talk irrelevantly; or perhaps at intervals endeavors to leave his bed or his house without any assigned reason. Next follows coma, or most frequently after this form of delirium, convulsions will precede a fatal termination.

ARTICLE V.

Inquiries and Objections in regard to some parts of a communication from Dr. Henry, on the Treatment of Fevers and Inflammations without Mercury. By Dr. URI P. GOLLIDAY, of Kickapootown, Illinois.

In the last number of the last volume of the Journal there is a communication from Dr. Henry on the treatment of fevers and inflammation without mercury, in which opium, in doses of four to six grains is highly recommended, not only in fevers but "in the treatment of all acute pneumonic affections."

Although the opiate treatment of various modifications of febrile and inflammatory disease can scarcely be said to be a new one, as notices of its value have occasionally been brought before the profession for several years past; yet, in the *doses* (four to six grains) spoken of, there may be but little doubt of its originating with Dr. Henry.

Speaking of the treatment of coryza, Dr. Christison says "for twenty years I have been accustomed to see it stopped at once by a full opiate given on the first day of its appearance—during the same period I have often seen a common catarrh without fever, cut short in like manner, if taken on the first, second or perhaps even the third day." The doctor

also names *Febrile Catarrh*, (meaning, I suppose, mild acute bronchitis,) *Epidemic Influenza*, and acute internal inflammations, with some explanatory modifications in the same category. (See Edinburgh Month. Jour. of Med. Sci., February, 1841, as quoted by Brathwaite's Retrospect, part 3, p. 45.)

Dr. Sobernheim, also gives us a summary of the diseases in which he found opium beneficial, and names intermittent fevers when offering a nervous character; inflammations of membranous, glandular, and sensitive organs; rheumatism and gout; catarrhal complaints, &c., &c.; but with the opium he combines antimony and mercury in the treatment of catarrhal diseases. (Rankin's Abstract, as quoted by Western Journal, December, 1845.) Professor Williams, of the University College, London, recommends it in doses of two or three grains of the aqueous extract, or from thirty to sixty minims of the liq. opii sedativus, or of Squire's tincture of the bi-meconate of morphia. But he says this plan can only be adopted where the bleeding has been sufficient to affect the action of the heart, almost, if not quite, amounting to syncope. (See Dis. of Respiratory system, Ed., 1845, p. 297.)

From these quotations (and their numbers might be very easily increased) it appears evident that the general plan is a good one, and whilst we have heretofore, and expect hereafter, to adopt it in all cases of fever where it is not contra-indicated by a tendency to disease of the brain, yet, with all deference to Dr. Henry, we would wish a little more light on the subject before we would unhesitatingly adopt it "in the treatment of *all* acute pneumonic affections."

The doctor very modestly observes—"When the practice receives the partial sanction of such names as Stokes, Bell, and Griffin, I shall expect that the suggestions of an obscure country practitoner will secure from the profession a sufficient degree of consideration to induce a trial of the remedy." But, notwithstanding this array of great names, there are some "philosophical theories" that interpose so as to prevent a too hasty adoption of the plan in all cases. Although I am of opinion that nosological distinctions and definitions have done much to impede the progress of practical medicine, and that an everlasting theorising in reference to the therapeutical application of remedies, may only "darken

counsel by words without knowledge," yet I am persuaded we canot wholly divest our minds of "theories" in the application of remedies to the cure of disease, especially when the physiological effect of any article in question may have been previously ascertained with some considerable degree of certainty. It is worthy of remark, that those diseases in which the opiate plan of treatment is most highly recommended, are those involving the nervous system more or less, and, as Sobenheim expresses it, of the membranous, glandular, and sensitive organs; and whilst we might include intermittent fever, coryza, dysentery, pertussis, &c., in this catenation, we might at the same time be disposed to exclude diseases of the brain, those involving the parenchymatous structure of the lungs, and all others where there was a tendency to congestion of blood.

Pareira says—"From the effects of opium on the cerebro-spinal system the following inferences may be drawn:

"1. That it is an objectionable agent in apoplexy, phrenitis, and paralysis.

"2. That under proper regulations it is a remedy which may be used to stimulate the cerebro vascular system," &c., &c.

"A knowledge of the effects of opium on the organs of respiration leads to the following conclusions:

"1. That this agent is contra-indicated in difficulty of breathing, arising from a deficient supply of nervous energy as in apoplectic cases; that it is improper where the venous is imperfectly converted into arterial blood; and, lastly, that it is improper in the first stage of catarrh and peripneumony, both from its checking secretion, and from its influence over the process of arterialization." (Materia Medica, pp. 697, 699, vol. ii.)

From some experiments made on animals by W. H. Judd, Esq., and abridged from the Med. Bot. Transactions by Braithwaite's Retrospect, part i, p. 58, the following "comparative view of the effects and changes after conium and of those after opium" is derived:

CONIUM.	OPIUM.
Brain unnaturally free from blood; ventricles almost dry.	Brain gorged by blood; ventricles full of serum.
Lungs empty of blood.	Lungs so full of blood that it runs out in a stream on cutting them.
Stomach, its villous coat and œsophagus white.	Villous coat and œsophagus red.
Right side of the heart gorged by dark blood. Left empty.	Heart's cavities all containing blood.

This is but a part of the comparative view, but enough for our present purpose; the reader is referred to the citation above for the balance, and for some very interesting remarks of Mr. Judd.

From these experiments we learn that the brain and lungs are full—are gorged with blood, from the use of opium. That such a state of these organs obtains more or less in man when a full dose of opium is taken, may be easily inferred from the fact that, with a more laborious respiration, there is a sense of fulness and tension in the chest and in the head; and in many cases there is increased redness of the face, with a swollen and turgid appearance of the vessels—in a word, there appears to be an excitation of the whole cerebro-vascular system.

As said above, we cannot always wholly divest our minds of "theories" in the application of medicines to the cure of disease; to do so in the present state of medical knowledge, would be to give medicine without reference to the pathological condition of the patient, or the physiological effects of remedies, an empiricism so gross that no man of feeling or honor could engage in it.

In pneumonia, the inflammation, engorgement and hepatization, in their different stages and modifications, constitute the disease or the results of a diseased action, which the physician wishes to remove. With this object in view, he would hesitate to use an article, proposed as the chief, or even as a very considerable part of the means of cure, or indeed in any other way than as a palliative under certain circumstances; when the experiments on animals, and the sensations produced in his own person by its use, make him believe it would cause at least one (and of course aggra-

vate the others) of those very conditions constituting the diseased action he wished to remove.

These considerations form some of the reasons why, without further knowledge on the subject, I would fear "to give the practice a trial" "in all acute pneumonic inflammations."

ARTICLE VI.

Case of Rupture of the Uterus—Recovery. By Dr. John S. Davis, of Dayton, Indiana.

On Monday morning, December 28th, 1846, I was summoned to attend a parturient female, of robust constitution, who had had premonitory symptoms of labor (her sixth pregnancy), some three days in charge of another practitioner. The pains were slight and irregular until Sunday evening, when they suddenly became regular, strong, and expulsive; os uteri dilated; vertix presented; waters drained off and pains continue to increase for some two hours when they suddenly ceased, as the patient expressed "by flying all over her." I found the patient, at 6 o'clock, A. M., free from pain, some nausea, pulse accelerated, weak, and small, uterine globe absent, abdominal parieties flaccid, and abdomen somewhat tender on pressure. On examination per vaginam, in a recumbent posture, I could not reach, with the index finger, the presenting part of the child. Accordingly I had my patient raised to her feet, when I felt the head of the child through the uterine parietes, resting upon the pubis (I found, after delivery, quite a depression in the left parietal bone where it had lodged upon the pubis). The examination was imperfect, as the patient could remain on her feet but a short time, as she became faint and sick. I expressed my fears of the nature of the case to the attending physician, and he thought it impossible, and we gave her the usual doses of ergot, which brought on slight uterine contraction, supposing the difficulty might depend upon

atony of the uterus. I now directed the patient to be laid with the perineum free of the edge of the bed, and introduced the hand with the view of bringing down the feet and delivering. I passed the index finger into what I supposed was the os uteri, soft and flaccid, immediately above the symphasis. when my little finger caught a loop of the cord in the hollow of the sacrum. I now directed my attention to this anomoly, when, to my astonishment, I found the os uteri high up in the hollow of the sacrum, with a loop of umbilical cord passed through it. The nature of the case now presented itself. The head of the child had passed into the cavity of the abdomen, through a rupture of the anterior wall of the uterus reaching that portion which looks into the vagina, whilst the body remained within the uterus. I continued the examination, till I learned the os uteri was sufficiently dilatable to admit the hand when I withdrew it and informed the attending physician and friends of the patient of her alarming condition. What was now to be done? We could scarcely hope to be able to return the head within the uterine cavity. However, we resolved to make an effort as no other alternative was left but the Cesarian operation. I accordingly dilated gently the os uteri and passed my hand within and firmly grasped the neck of the child with my fingers against one shoulder and thumb the other, (the palm of the hand looking to the face of the child) and by pushing somewhat forcibly upward and backward, I succeeded in replacing the head within the uterine cavity. I now placed the head in the right iliac fossa, searched for and brought down the feet and soon delivered my patient of a still born child. The uterus contracted pretty firmly upon the placenta and membranes by the assiduous application of gentle friction by the attending physician, and were expelled in due time by the uterine contractions alone. We now placed our patient carefully in bed at 11 o'clock, A. M., gave an opiate and ordered a dose of sulphate of magnesia to be followed in a few hours with another, if the bowels were not moved, and returned home with directions to be sent for should peritonitis supervene before our next visit in the morning. When we arrived at eight o'clock we found our patient in high excitement, which had come on at daylight, with full bound-

ing pulse, hard and frequent, face intensely flushed, and abdomen tender and much swollen, bowels freely moved and unable to urinate. Her arm was tied and blood permitted to flow till a decided impression was made upon the circulation. Urine drawn off with the catheter, and tartarized antimony as largely given as the stomach would bear. She was freely bled again in the evening till the pulse was brought down. Urine drawn off, and antimony continued through the night.

At eight o'clock on Wednesday morning, the condition of our patient was becoming worse—pulse more frequent (one hundred and twenty beats in a minute) and reduced in volume; abdomen more distended and soreness increased; face still flushed and bowels freely moved. We now gave—

℞.—Calomel, grs. xx;
Opii, grs. iii,

to be repeated in eight hours—applied evaporating lotions to the abdomen, drew off the urine, and returned home.

At our evening visit we found the patient still worse—pulse in frequency, abdomen more swollen, and soreness so much increased that she could not bear the weight of the hand upon the abdomen. The bladder was again emptied and medicines continued.

On Thursday morning the symptoms were becoming more alarming, pulse more frequent and intermittent at times and smaller in volume, and the tongue which had presented nothing unusual had now became very dry. In the evening copious bilious discharges from the bowels supervened. Calomel discontinued and opium given alone. Urine again drawn off.

On Friday morning the bowels still moved freely, the discharges serous and frequent; pulse frequent, intermittent, and feeble; abdominal swelling and sourness subsiding.

Things continued pretty much in this condition till Monday morning—abdominal swelling and soreness subsiding; the pulse at times more frequent, feeble, and intermittent; the bladder unable to evacuate its contents, and serous discharge still from the bowels—when the symptoms seemed

to improve; pulse became slower and fuller, and not intermittent; aodominal swelling and soreness rapidly subsiding; bladder resumed its functions, and tongue more moist and face less flushed. Our patient continued gradually to improve for some days when she was attacked with phlegmasia dolens in one limb; it was a slight attack and readily yielded to a mercurial purge, followed by aperients and fomentations to the affected limb. It is proper here to observe that the breasts secreted no milk. After the subsidence of the phlegmasia dolens, metritis supervened, attended with much swelling and soreness, a purulent discharge from the vagina, constipated bowels, and slight general fever with white furred tongue. By the use of purgatives and aperients, epispastics and tepid injections into the vagina, together with a gentle mercurial impression kept steadily up for some three weeks, the patient was again convalescent and was able, at the end of two months from her confinement, to walk about the house.

ARTICLE VII.

Remarks upon the Organization of the Medical Department of the Army, and the Effects of Marching and a Camp Life in producing and modifying Disease. By W. B. Herrick, M.D., Professor of Anatomy in Rush Medical College, late Surgeon 1st Regiment Illinois Volunteers, &c.

In compliance with the solicitations of many friends, and with the view of satisfying, to some extent, the desire manifested by our medical brethren for information concerning the medical department of our army in Mexico, we propose to lay before our readers, from time to time such facts and remarks as we may deem most interesting and worthy of their attention.

As an introduction to our subject, we shall endeavor, at this time, to give a brief history of a surgeon's duties, as

prescribed by army regulations, and to make a few remarks of a general character upon the effect of long marches and a camp life in producing and modifying disease.

With regard to the organization of the medical department, it may be stated that the Surgeon General, stationed at Washington, is charged with its administrative details, and has the control of all the officers belonging to it. He assigns the surgeons and assistant surgeons to regiments, posts, and stations, and all official communications from them are made direct to him.

The senior medical officer of every separate division of the army, in the capacity of medical director, inspects hospitals, sees that the necessary medicines are provided, and that the surgeons and assistant surgeons perform their duties and abide by the rules and regulations given for their government and direction.

The surgeon of a regiment, so far as his professional duties are concerned, obeys the instructions of the medical director, and is responsible to him for the order and neatness of his hospital, for the manner in which the assistants and attendants perform their duties, and for the comfort and proper treatment of the sick. It is his duty to keep, for the inspection of the medical director, a register containing the names and rank of the sick under his charge, and also, a prescription and diet book containing his written prescriptions and directions for every case.

It is the duty of the orderly sergeant of each company to make, to the surgeon, written morning reports of sick, and to see that those who are able, present themselves for inspection at time and place appointed by the surgeon. Every surgeon or assistant surgeon, having charge of sick, makes monthly reports to the medical director, and every one attending to the sick of a regiment, post, or garrison, makes daily morning reports to the commanding officer with such remarks and suggestions in relation to whatever may effect the health of the soldiers as he may deem necessary and proper.

With regard to personal observation and experience, it may be stated that the writer of this communication joined the division of the army under General Wool, at San An-

tonio, Texas, about the first of September last, and was assigned to duty with the 1st Regiment Illinois volunteers, under the lamented Colonel Hardin, about the 20th of the same month, and continued with that regiment, for the most of the time, the only medical officer until the division joined the main army under General Taylor, near Saltillo, about the first of January of the present year.

It appears from our monthly reports, that from the 20th of September to the 1st of October, the whole number of cases treated in the regiment—the mean strength of which was, at that time, about 800—was as follows:

Remaining sick on the 20th,	30
Taken sick after the 20th and before the 1st of Oct.—	
Of Miasmatic Fever,	45
Diarrhœa,	38
Dysentery,	2
Bronchitis,	20
Pneumonia,	3
Ulcers,	3
Abscess,	3
Cutaneous Eruption,	4
Fracture,	1
Total,	119
Aggregate,	149

It will appear, by comparing the above report for a part of September with those of other months which will follow, that the number of sick was much greater in proportion than at any period of time after, of the same length.

Among the causes which conspired to produce a greater amount of sickness at this time than at any subsequent period, the following may be mentioned as, probably, among the most prolific:

The men had then been in service but a short time, and were suffering temporarily, from a change of diet and habits consequent upon exchanging the pursuits of civil life, and the comforts of home, for the duties of soldiers and the exposures incidental to a camp life. It is well known, also,

that about a month previous to this time, the 1st and 2d Illinois Regiments, soon after the measles had prevailed as an epidemic in their camp, made the march from the coast to San Antonia just at the close of the rainy season, under a scorching sun, and over plains covered, in many places, to the depth of two or three feet with water. The effect of this first long march was most disastrous. Many convalescent from measles had relapses; others contracted severe bronchial affections or diarrhœa, and all suffered more or less from exposure and fatigue.

The above is the only instance in which marching proved detrimental to health. At every subsequent period during the campaign, the number upon our sick report diminished most rapidly, during and immediately after a long march, and as certainly increased after remaining in camp for any length of time.

Upon referring again to our sick report for the month of September, it appears that the 149, which was the aggregate, as before stated, were disposed of as follows:

Returned to duty,	95
Left in General Hospital at San Antonio,	40
Discharged from Service,	5
Died,	1
Remaining on the sick list but convalescent and able to march,	8

It is a remarkable fact, that those of the sick who, in compliance with their own requests, were permitted to remain with the regiment and participate in the fatigues and exposures incidental to this long march, recovered more rapidly and were sooner able to return to duty than others apparently as well but who were left behind in hospital.

It appears that of the one hundred and forty-nine treated during the last ten days of September, ninety-five were returned to duty before the first of October, and previous to marching. Most of these were convalescents from the different diseases above mentioned, who had been recovering but slowly whilst they remained still and quiet in camp, yet after a few days march, they improved most rapidly, and

after a week or two were able to perform a day's march with as much ease apparently, as others. Protracted diarrhœa and bronchial affections, which had yielded but slowly under the most approved modes of treatment in camp and hospital, were apparently cured without medicine, by active exercise in the open air.

These facts, as it appears to us, show that the advantages to be derived from this kind of treatment have been, in general, underrated by practitioners. From observing during the past year, the salutary effects of long marches in preventing and curing disease, we have become convinced that moderate and even active exercise in the open air, without medicine, is more beneficial in many diseases than the most approved therapeutic remedies administered to patients inactive and confined in badly ventilated apartments. By comparing the following report for the month of October, during which we were, for the most of the time, on the march from San Antonio to Monclova, with that previously given of the last ten days of September spent in camp, we find the difference in the number of cures most remarkable.

As before stated, eight remained sick the 30th of September. During the month of October the number added was as follows:

Cases of Intermittent Fever,	48
Remittent Fever,	41
Diarrhœa,	42
Mumps,	4
Bronchitis,	4
Sprains,	4
Neuralgia,	1
Inflamed Testis,	1
Ophthalmia,	1
Scorbutis,	1
Total,	147

Aggregate one hundred and fifty-five. These cases were disposed of during the month as follows:

Returned to duty,	110
Sent to Hospital,	10
Remaining sick,	10
Convalescent,	16

Thus it appears that the whole number taken sick during all of October was but one hundred and forty-seven, making forty-nine the proportion for ten days, whilst on the march; and one hundred and nineteen for the same length of time in September whilst in camp.

The importance of keeping an army constantly moving in order to secure the health of soldiers is made still more apparent by referring to our report for January made soon after we had joined general Taylor's advance near Saltillo, after having performed the almost unprecedentedly rapid and long march of about one thousand miles:

Taken sick during the month—

Of Intermittent Fever,	11
Remittent Fever,	23
Diarrhœa,	9
Constipation,	10
Hepatic Disease,	1
Bronchitis,	4
Pneumonia,	1
Laryngitis,	1
Syphilis,	1
Abscess,	4
Ulcers,	3
Fracture,	1
Rheumatism,	1
Tumors,	6
Scorbutis,	3
Fistulo in Ano,	1
Anasarca,	1
Total,	81

From the above statement it appears that the number taken sick during the month of January, as compared with Sep-

tember was as 1 to 4, nearly; and as compared with October as 1 to 1·7.

That the health preserving influence of a long march is very great is made very apparent by this comparison of some of our monthly reports. Still, however, the statement, as made above, falls far short of exhibiting the full extent of its beneficial effects; for during a part of the months both of October and January, we were in camp, and consequently not experiencing, during the whole time, the beneficial effects of the march.

The comparison of some of our daily morning reports, exhibiting the number of cases treated from day to day whilst in camp, with others made during some of our long marches being free from the above objection, and therefore more strictly in accordance with facts, exhibits a still more remarkable difference.

From the first to the tenth of November inclusive, during which time we remained in camp, at Monclova, our daily morning report ranged from nineteen to thirty-two, averaging about twenty-five for each day. From the eighteenth to the twenty-fifth of December, on the other hand, whilst performing the rapid march from Panas to Saltillo, our morning reports ranged from six to eleven, averaging about nine per day.

The comparison of our monthly reports, for reasons before stated, makes the difference appear less than it really was. On the contrary, our morning reports whilst in camp compared with those made upon the march, make it greater than the facts will justify, as it was our practice, upon starting on a long march, to leave our worst cases behind in hospitals. In accordance with this practice, eleven of the worst cases in our regiment were left at Monclova when we left there for Panas, and nine at Panas when we left there for Saltillo.

After making all these allowances, and even admitting that the whole number left behind in Hospital would have remained upon the sick report during the march, had they continued on with the regiment, and still it will be seen that the amount of sickness whilst upon the march would have been nearly one hundred per cent. less than when in camp.

The preceding facts, as it appears to us, show that the

difference in the amount of sickness occurring in camp and upon the march, is so great as to make it a matter of vital importance to our army, as well as a subject of interest to the profession.

As to the causes of this great difference, we may remark that the simple diet used upon the march, being less stimulating and irritating than the mixed food more readily obtained in camp, had a less tendency to produce diarrhœa and dysentery. The air, too, in and around large encampments, becomes, after a time, vitiated, and tends really, no doubt, to the production of miasmatic and other diseases. But, above all, inactivity, both of body and mind, produces lassitude and general debility.

Our remarks upon the above subject have already extended too far, perhaps, to be profitable to our readers; we shall therefore close for the present, remarking in conclusion that it is our intention to lay before our readers in the next number of our Journal, a brief history of some of the most important cases that have occurred under our observation; and also a short account of our surgical experience during and after the battle of Buena Vista.

PART II.—REVIEWS.

ARTICLE VIII.

Encyclopedia Americana: Supplementary Volume. A popular Dictionary of Arts, Sciences, Literature, History, Politics, and Biography. Vol. xiv. Edited by HENRY VETHAKE, L.L.D., Vice President and Professor of Mathematics in the University of Pennsylvania, Member of the American Philosophical Society, Author of a Treatise on Political Economy, etc. Phila.: Lea and Blanchard. 1847. pp. 663, 8vo. (From the Publishers — For sale by Joseph Keen, Jr., Chicago, Illinois.)

The book which we propose to introduce to our readers in this notice, is a supplementary volume of the Encyclopedia Americana; a work which has been before the public for fourteen years, and has been considered worthy of a place, among works of reference, in almost every library of any pretensions. It was founded on the basis of the "Conversations Lexikon," a German work, of high repute and which has passed to a ninth edition, now in course of publication. The rapid growth of the arts and sciences, and the many subjects of interest in the other departments of which the encyclopedia professes to treat, which have arisen or extended their limits within the last fourteen years, have left the original work so far behind the age, that the present volume was imperatively called for "to restore to the work all the advantages which belonged to it originally, as a book for ready consultation on subjects of general or popular interest."

The editor, Professor Vethake, has been long sufficiently known to the literary and scientific of our age, both as a teacher and author; but we are happy to have this opportunity afforded us to offer our small mite of admiration of his high worth and excellence as an erudite scholar, and of esteem for his many excellent qualities of a social character, which we have had an opportunity of learning, not only by perusal of his writings, but by personal acquaintance with

him in the walks of private life. Indeed, we may safely assert that we know of no one better fitted for the task which he has assumed and accomplished; a task demanding for its perfect completion, discrimination in selection of material, judgment in arrangement, and much research and information of a diffuse and general character.

In the biographical article, Professor Vethake has selected with much judgment the names of those citizens of *foreign* countries who enjoy high reputatation; but has judiciously abstained from notice of any Americans of distinction, but such as have been removed by the hand of death from the field of envy, detraction and prejudice, and to whose memory justice impartial may now be done. In perusing the biographical sketches of living foreigners, eminent for literary and scientific abilities, we have been gratified to learn much that we would not know where else to find, and we have been particularly delighted with the notices of the recent deceased of our own times and country, whose biographies have now for the first time been presented to the world.

The historical and political articles are brought up to the present date, and will be read with interest by all. Their conciseness and clearness, together with the mass of statistical information which they contain in their connection with commerce and population, render them highly valuable.

But it is in the scientific department of the work that our readers will be more particularly interested, and to this we purpose to give a more extended notice. As, however, our space will not permit a notice of many subjects, we have selected one article which is of most length, and in which we think, considering the condensation which the work required, much justice has been done to the subject, itself of considerable interest to our professional and scientific readers. The article we refer to is that on "Magnetism." In the original work, electricity, galvanism, and magnetism were treated of separately, but in the present volume they are all treated under the one heading; the intimate connection which comparatively recent researches have shown to exist between these forces, rendering it highly advantageous to treat of them in this way. The order in which the article presents these subjects is as follows:

I. *Ordinary Electricity;*
II. *Galvanism;*
III. *Magnetism;*
IV. *Electro-Magnetism;*
V. *Thermo-Electro-Magnetism;*
VI. *Magnetic Electricity; and*
VII. *Animal Electricity.*

Upon these various subjects the article before us reviews all that has been done in the last fourteen years, and is the most complete and condensed account of the advance of electrical science that we have yet met. The matter which it contains, indeed, is only to be found in monographs of the discoverers, distributed through the various foreign and American scientific publications of the day. These have had their contents sifted, and in the article under review, is presented the pith of them all, as far as the limits of a work of the kind would permit. We will lay before our readers a condensed abstract of the various headings just enumerated, endeavoring, if possible, to include all the recent discoveries of importance.

"By *Ordinary Electricity* we understand that which is usually evolved by means of friction in the common electrical machine, and which differs from galvanism in the greater *intensity* of its action, and in the smaller quantity of the agent operative in the production of a given phenomenon."

Velocity of Electricity.—This important discovery the world owes to Professor Wheatson of King's College, London, and to give a satisfactory view of the ingenuous mode by which the inconceivably rapid passage of the electrical current, was measured, we copy at length the account given in the work before us.

The problem consisted in determining the velocity of transmission of an electrical discharge from a Leyden jar, through a long conductor.

"A copper wire, some fifteenth of an inch in diameter, and half a mile long, was insulated in such a manner that its parts were not in contact with each other, three breaks being made in it; one near the beginning, another near the end, and the third near the middle of the length.

"These breaks were then brought over each other and

arranged, say in a vertical line, before a small mirror which could be made to revolve, by means of watch work, eight hundred times in a second. When the mirror was at rest, and a charge of electricity from the jar was passed through the long wire, three sparks were seen in the reflector apparently at the same instant, one above the other, as shown in the first figure in the margin. But when the mirror was made to revolve at its full speed, the appearance was that exhibited by the second figure. 1st. Each spark appeared elongated or drawn out into the appearance of a line of light, indicating that the duration of the discharge occupied an appreciable portion of time; for if the spark were not absolutely instantaneous but required sometime to pass the opening in the wire, and the mirror revolved sufficiently fast, the light would be reflected at each instant in a new direction; and, on account of the continuance of the impression on the eye would exhibit a line of light. 2d. The spark at the beginning of the wire was vertically over that at the ending, while in all the experiments the spark at the middle was thrown a little to one side: this appearance proves that the disturbance of the electrical equilibrium commences simulteneously from each end of the wire, and arrives last at the middle. By measuring the distance of the eye from the mirror, and the apparent lateral deviation of the middle spark from the other two, the fractional part of the revolution of the mirror performed during the passage of the discharge from either end to the middle, or through half the length of the wire, could be obtained; and knowing the length of the wire and number of revolutions of the mirror in a second, the velocity of the dis charge could be determined. In this way, Professor Wheatstone found the velocity of the discharge to be about two hundred and eighty-eight thousand miles per second, ro greater than that of light through the celestial space. He also inferred from the elongation of the light, that the spark though not absolutely instantaneous, occupied in its passage less than the millionth part of a second. The fact that the discharge from a Leyden jar reaches the middle of a long wire last, has been thought to favour the hypothesis of two fluids passing in opposite directions; but the same fact is also a legitimate consequence of the hypothesis of a single fluid."

Fig. 1.

Fig. 2.

Specific Inductive Capacity.—Under this head is presented the views which Dr. Faraday professes to have established by conclusive experiments, relative to the different powers possessed by different substances, of transmission of induct-

ive influence. Dr. F. ascribes induced electrical excitement to a polarization of the particles of the non-conducting medium interposed between the excited body and the body in which inductive excitement is produced. Differences in inductive capacity were found to exist among liquids and solids, but all gaseous bodies possessed the same capacity, which was not altered by variatiations of density, elasticity, dampness, or dryness. Dr. F. assumes the fact that induction takes place in curved as well as straight lines, which our author thinks he is not warranted in doing.

"Dr. Faraday has also made a series of investigations, relative to the discharge of ordinary electricity. These he has classed under three heads, namely, the discharges by *conduction, disruption, and connection*. The *discharge by conduction*, takes place without chemical action, or any necessary displacement of the particles of the conductor; but different bodies oppose very different degrees of resistance to this action. He finds that all bodies except gasses are, to a certain extent conductors; that all oppose a certain amount of resistance to the passage of the electrical discharge; and that conduction and insulation are different degrees of the same quality. The *disruptive discharge* is that which takes place generally between the conductors in the form of a spark. It varies very much when different aeriform substances are interposed between two conductors. An apparatus was constructed in which the same discharge could pass through either of two cylinders, one filled with gas submitted to the experiment and the other filled with common air used as a standard of comparison. With this it was found that muriatic acid gas has nearly three times the specific insulating power of hydrogen, and nearly twice that of atmospheric air. The disruptive discharge sometimes changes its form from the spark to the brush, and the latter is shown by Professor Wheatstone, to consist of a succession of intermitting discharges. The continued sound which accompanies the brush, is due to the recurrence of the souud from each discharge: the brush exhibits specifie characters in different media, which are manifested by difference of colour, light, form, and sound. The *connective discharge* is that produced by the motion of charged particles. The particles of air, for example, in contact with the projecting part of a conductor, become highly electrified and are repelled by the conductor, thus giving rise to currents of air which rapidly carry off the charge. Dr. Faraday traces an analogy between this discharge and the gal-

vanic current, in which, as has been shown by Ampere, the consecutive portions repel each other."

Electricity evolved from a Steam-Boiler.—Most of our readers are perhaps aware that the most powerful electrical machine ever exhibited in this country, was constructed of a peculiar arrangement of a steam boiler. The article before us gives an account of the manner in which electrical excitement may be produced by this means. We accordingly extract it:

"In 1840 a workman near New Castle, in England, discovered that, while one of his hands was plunged in a current of steam issuing from a boiler, a spark would pass between his other hand and any conductor to which it was approached. We owe to Dr. Faraday the discovery of the proper explanation of this phenomenon. He has shown by a set of conclusive experiments, that the evolution of the electricity in this case is due to the friction of the drops of water from the condensed vapor against the sides of the tube, through which they are impelled by the elastic force of the steam. If the current issue through a stop cock in the side of the boiler, it produces at first, or so long as the cock is cold, a powerful excitement; but the moment the metal becomes so warm as not to condense the steam, the electricity disappears. Any substance that increases the conducting power of the liquid, being placed within a hollow in the stop-cock, destroys the existing power as effectually as moisture does that of the rubber of the machine. The final conclusion from the researches made, is, that pure steam or gases do not excite electricity by friction against solids or liquids, and that the effect, in all cases, is due to the presence of a liquid which rubs against a solid. Mr. Armstrong, availing himself of this method of developing electricity, has constructed an electrical machine of immense power, which consists principally of a tubular boiler, about the size of that of an ordinary locomotive, insulated on stout glass pillars, and furnished with a series of pipes through which the steam is blown off. One of the largest instruments of this kind has recently been exhibited in this country."

Dynamic Induction of Ordinary Electricity.—The laws governing the phenomena of dynamic induction of ordinary electricity, having been entirely developed by a philosopher of our own country—Professor Henry, of Princeton, New Jersey—and the phenomena being themselves of a novel

and highly interesting character, we feel ourselves warranted in presuming them of sufficient interest to our readers to give them more space than other departments of the subject. It having been our great privilege to have witnessed a portion of the experiments conducting the professor to his generalizations while serving him in the humble, but much valued capacity of assistant, we can bear witness to the almost incredible amount of severe thought and physical labor expended upon the investigation. Having thus become aware of the great scientific value of the discoveries, it has pained us that while credit has been given to Professor H. abroad, his valuable additions to science have been so little appreciated in his own country, and that the knowledge of the important developments effected by him should have been so little diffused. Justice, though tardy, is now, we are happy to say, about to be rendered; and government by appointment, to an office of high trust, and demanding great scientific attainments, has begun to redeem itself from the odium of neglect of a distinguished individual, whose name will be prominent in the scientific history of our country, long after his political cotemporaries will have sunk into oblivion. We give in full that portion of the article devoted to this branch of the subject.

"In 1836, Professor Henry, of Princeton, commenced a series of investigations, the object of which was to ascertain whether there existed any dynamic phenomena in ordinary electricity analagous to those found in galvanism. His labors on this subject, which have been continued at intervals up to the present time, have given rise to a series of new phenomena, of which our limits will not permit us to give more than the following brief analysis:

"1st. When the discharge of a Leyden jar is transmitted through a conductor, for example, a copper wire, it induces in an adjoining parallel wire, a current of electricity analagous to that which, under similar circumstances, is developed by a galvanic current.

"2d. The direction of this induced current, as indicated by the magnetic polarity given to a steel needle, enclosed in a spiral forming part of the circuit, changes its sign, (1) with a change in the distance of the two wires; (2) with the proximity of a third parallel wire, formed a closed circuit; (3) with an opening in the wire which receives the induc-

tion; and, (4), with the quantity and intensity of the discharge.

3. When the first induced current is made to act on a third wire, a second induced current is produced, which, in its turn may give rise to another current, and so on. When the several wires are at a considerable distance from each other, and the direction of the several currents is determined by the magnetization given to a sewing needle, we have, (in calling the direction of the current from the jar plus,)

$$+-,\ +-,\ +-,$$

&c.; that is, each succeeding current is opposite in direction to the current which induced it.

"4th. When a plate of metal is placed between two flat spirals, and a discharge from a jar passed through one of them, the induced current which would be produced in the other, is neutralized by an adverse current induced in the plate.

"5th. The dynamic induction of ordinary electricity takes place at a surprising great distance. A discharge from a jar being passed through a parallellogram of wire, arranged around the ceiling of an upper room, magnetized needles in a spiral forming part of a corresponding parallellogram placed in the floor of the cellar, at the distance of thirty feet below. In another set of experiments, needles were magnetized in a parallel wire at the distance of three hundred feet from the primary current; and from all the experiments it appears that the inductive results may be obtained at an indefinite distance, provided the length of the parallel wires be increased in proportion to the distances to which they are separated.

"6th. Inductive effects similar to those we have described can also be obtained from the discharge of the thunder cloud. Professor Henry attached to the metallic roof of his house a copper wire, which, passing through his study, terminated in a deep well near by: a needle placed in a spiral forming a part of the conductor through the study, was magnetized at every flash of lightning within a circle of twenty miles in diameter around Princeton. The needle is sometimes magnetized in one direction and sometimes in the other.

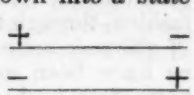
"7th. When sparks are thrown from a small machine on the middle of a lightning rod, the electricity does not tend to pass silently into the earth; on the contrary a spark can be drawn from every part of the rod, even from that near the earth.

"8th. It is also proved by the magnetization of a needle placed inside and outside of a hollow bar, that although galvanic electricity passes through the whole capacity of a

conductor, ordinary electricity passes principally at the surface. It is also shown, by a series of conclusive experiments that, during the first moment of the discharge of a Leyden jar, half the length of the conductor next the end at which the discharge enters is *plus*, and the other half is *minus*, the intensity diminishing each way to the centre; and that at the next moment the condition is reversed, the opposite end becoming *plus* and the other *minus*.

"After a laborious investigation of the phenomena we have described, Professor Henry has succeeded in referring them all to the hypothesis of the existence of an electrical plenum through which dynamic induction is transmitted wave fashion; and in showing that, in all cases of the disturbances of the equilibrium, the fluid comes to rest by a series of oscillations. Thus, in the discharge of the jar, all the phenomena indicate a principal action in one direction and a series of reflex actions backwards and forwards, each more feeble than the preceding, until the equilibrium is restored.

"Our limits, however, will not permit us to give in detail the application of this hypothesis to the explanation of this phenomena; we can only allude to the explanation of a few of the more prominent ones. In the discharge of a Leyden jar through a long wire, we know that the disturbance reaches the middle of the length last; and this may be explained by supposing a quantity of free electricity to enter the end of the wire next the knob, and, at the same time, an equal quantity of the natural electricity of the wire to be drawn from the other end next the outside. The whole wire, for an instant, must therefore be thrown into a state represented by the upper line in the annexed diagram, in which the first end is *plus* and the other *minus*. The natural electricity of an adjacent parallel wire will, according to the law of ordinary induction, assume for a moment the condition represented by the second line, and in passing to this state from that of equilibrium, it will exhibit a current adverse to that in the primary wire; but the electricity of the primary wire will pass to its ordinary state of equilibrium by a series of oscillations, each of which will induce an opposite wave in the second wire. If the two two wires be at such a distance from each other, that the induction of only the first wave is effective in giving magnetism to the needle, it is evident from theforegoing that we shall always have a polarity indicating an induced current opposite to that of the primary current; but if the wires be brought nearer each other, then the needle will be first magnetized to saturation by the first vibration; and



immediately afterwards the magnetism will be discharged and that of an opposite kind developed by the second vibration. In the same way, if the wire be placed still nearer, another charge will be produced in the polarity of the needle due to the third vibration, and so on.

"It is not difficult to perceive that the variation in other conditions may also change the polarity of the needle, thus: suppose a break be made in the circuit of the secondary current, then the primary wave, having the greatest intensity will alone pass through the opening, and the polarity of the needle will be due to the action of this; while if the opening be closed, the residual magnetism of the needle may be due to the action of some of the succeeding vibrations. In this way all the phenomena described in (2) are readily explained.

"Also all the phenomena of the lateral discharge (7) find an easy explanation in a reference to the same principles. At the moment a charge is passing along the wire, each consecutive part of the length of the conductor becomes charged in succession, and tends to give off a spark to all neighboring conductors, for the same reason that a conductor charged with statical electricity tends to produce the same result. All the phenomena of dynamic induction are analagous to those of statical induction, with this exception, that, in the former, we are obliged, in order to explain all the facts, to admit *time* as an element of the calculation. The indefinitely greater distance at which dynamic induction takes place between two parallel wires, than that at which statical induction would be exhibited under the same circumstances, together with other phenomena, lead us to suppose that the former induction is transmitted in time, wave fashion, through the electrical plenum. All the phenomena of galvanic induction may be referred to the same principles as have been adopted in the explanation of the facts we have given in this article."

II. *Galvanism.*—Under this heading the improvements in the construction of the galvanic battery are mentioned, and the objects gained by those improvements explained. As these may, however, be found sufficiently and indeed more fully detailed in recent works on chemical philosophy, (see Daniels' Introduction to Chemical Philosophy and Graham's Chemistry,) we prefer omitting it, as also the article on *electrochemistry*, that we may be able to give space to a few other extracts upon subjects not to be found in ordinary and easily accessible works.

III. *Ordinary Magnetism.*—Upon this branch of the subject our author gives an account of the experiments simultaneously made by a number of observers, and in different parts of the world, with a view to ascertain the *declination* or *variation*, the *inclination* or *dip*, and the *intensity* of magnetism. As the connection of these subjects with the objects of our Journal are very remote we omit them entirely and pass on to—

IV. *Electro-Magnetism.*—As the facts upon this subject are generally known, we shall not stop to detail them, but merely state that credit is given by Professor Vethake to Professor Henry, of Princeton, for the most valuable recent additions to this department of science, and accords to him the merit of first producing motion by a combination of the forces of magnetic and electrical attraction—in a word of being the inventor of the electro-magnetic machine.

V. *Thermo-Electro-Magnetism.*—The only new fact that we find in this portion of the article which we have not found in ordinary works, is the following:

"Professor Henry has lately made an interesting combination of the thermo-electrical apparatus and the telescope. He places the end of the thermo-electrical pile at the point where the eye-glass is inserted in the tube of a reflecting telescope; and, by this combination, is enabled to detect the difference of radiation from small objects at the distance of several miles. It also exhibits a remarkable difference in radiations from different clouds and also from different parts of the clear sky, and will, therefore be an important instrument for meteorogical purposes."

Magneto-Electricity and Galvanic Induction.—We know of no work which gives an account of this branch of science at all comparable in clearness and conciseness with the book under review. So comprehensive is it, that we feel that any attempt to condense it would be to leave out portions equally important with others we should retain; and though our article has already expanded, beyond our first intentions, we feel impelled to give the extract entire:

"By magneto-electricity is understood the electricity which is developed by magnetic induction. The first discoveries in this division of our subject, which were made by Dr. Fara-

day in 1832, may be briefly stated as follows:—1. If a magnet be suddenly approached to a mass of conducting metal, a current of the natural electricity of the conducting substance is produced in the conductor, in a direction parallel and opposite to that of the hypothetical current, which, according to the theory of Ampere, revolves around the magnet at right angles to the axis. 2. So long as the magnet remains at rest near the conductor, no effect is observed; but the moment it is drawn away, a current takes place in the same direction as that of the hypothetical current in the magnet. The current in each case continues only during the time of the motion of the magnet. 3. If a piece of soft iron be suddenly magnetised near a mass of conducting matter, a current of electricity will be induced in the conductors in the same direction as that produced by the approach of a permanent magnet. 4. So long as the magnetism of the iron remains of the same intensity, no current is observed; but if the intensity be suddenly diminished a current is produced in an opposite direction to that of the current which was developed at the time of the magnetizing of the iron. The current, in both cases, continues only during the indefiinitely short period in which the iron is undergoing the change of state. 5. These facts may be readily certified by coiling a long covered wire into the form of a ring, about four inches in diameter and consisting of about one hundred turns. The two ends of the coil being connected with a galvanometer, a current in one direction will be exhibited when a bar magnet is thrust into the axis of the ring, and another in an opposite direction when the bar is drawn out.

While the magnet remains at rest, with its ends for example, just within the ring, no current is indicated; but if it be pushed further in or drawn further out the needle will be deflected by an induced current in the wire. Also a current will be induced in a coil by placing in its axis a bar of soft iron, and suddenly magnetizing this, either by approaching to its two ends the opposite ends of two magnets, or subjecting it to the influence of a galvanic coil, or even to the inductive action of the earth, as is the case of magnetizing a bar by suddenly turning it in the direction of the dipping needle. A magneto-electrical machine, which will produce a rapid succession of alternate currents, may be formed in this way, by mounting a bar of soft iron surrounded by a long coil of wire on an axis like a dipping needle, and causing it to revolve rapidly in the plane of the magnetic meridian; at each half revolution of the bar its polarity is changed, and consequently a series of currents in opposite currents is produced. To exhibit, however, the effect by the mere induction of the earth, a large bar, surrounded by a

very long wire, is required. A much more intense induction is produced by causing the ends of the same bar, at each half revolution, to pass near the opposite poles of two permanent magnets, or, what amounts to the same thing, by making them revolve before the two poles of a horse-shoe magnet. Various machines have been devised in accordance with these principles, for exalting the effects and facilitating the experiments. The most complete arrangement now in use was the original combination of our countryman Mr. Joseph Saxton. With a machine of this kind, shocks, decompositions, and all the other effects or galvanism, may be produced.

"*Galvanic Induction.*—From the well-known identity of action of a permanent magnet and a cylindrical coil through which a galvanic current is passing, it might be reasonably supposed that effects similar to those we have just described might be produced by galvanism; and the truth of this inference was also proved by Dr. Faraday. The results obtained by him may be stated as follows:—1. When a conductor, for example, a copper wire, through which a current of galvanism is passing, is approached to another conductor arranged parallel to the first, a current of the natural electricity of the metal is induced in the second wire in a direction contrary to that of the inducing current. 2. As soon as the motion of the conductor ceases the current ceases, and, however long the two conductors remain relatively at rest, no effect will be produced on the needle of the galvanometer; but the moment the inducing current is withdrawn, a reflex current is exhibited. 3. If two conductors are placed near and parallel to each other, and a galvanic current is passed through one of them, a momentary induced current in the opposite direction, will be produced in the other. 4. So long as the galvanic current is kept at the same intensity, no current is observed in the adjoining conductor; but the moment the galvanic current is stopped, a current in the same direction as that of the original currrent is induced in the adjacent wire. 5. All these principles are readily proved experimentally, by substituting, in the experiments we have given under magneto-electricity, instead of the bar magnet, a coil in the form of a cylinder, consisting of several hundred feet of wire, through which it is made to pass. 6. After the discovery of Dr. Faraday of the foregoing principles of galvanic induction, the most important additions to this branch of electricity have been made by Professor Henry. The following is a brief analysis of his results:

"*Induction of a Current on itself.*—When the poles of a single battery terminating in cups of mercury, are joined by a short wire, no spark, or at least a very feeble one, is obtained

at the moment of breaking the circuit. But when the same poles are joined with a long wire, a brilliant spark is exhibited each time one end of the wire is drawn from the cup of mercury; and if the conductor be sufficiently long, pungent shocks may be obtained by grasping the end of the wire, while the rupture of the current is made. These effects Professor Henry has shown to be due to a momentary induction in the conductor itself, by which, at the moment of the cessation of the battery current, the natural electricity of the metal is put into intense motion. The effects, which are increased by coiling the conductor on itself, are of two kinds; those of quantity and those of intensity. Those of the first kind are best exhibited by means of a conductor of copper riband, about one hundred feet long and an inch and a half wide, covered with several thicknesses of silk, and wound into plain spiral like the main-spring of a watch. When one of the projecting ends of the coil is fastened to one of the posts of a small single battery, and the other end drawn along a rasp attached to the other pole, a series of deflagrations is produced as brilliant as those excited in the ordinary way with a battery of twenty or thirty pairs highly excited. To produce, however, the most pungent shocks from a small battery of a single pair of plates, the coil should be formed of a conductor four or five hundred feet long. The pungency of the shocks may be much increased by placing in the axis of the coil a bundle of iron wires; we shall then have the inductive effect of the temporary magnetism of the iron added to that of the coil itself. On this principle the machines for medical purposes are now constructed. 7. *Conditions which influence the production of a secondary current.* When a flat riband coil, such as we have described, has been placed on another coil of the same kind, and a current of galvanism of a single battery passed through one of them, an induced current of quantity, or such as will produce brilliant deflagrations and magnetise needles, will be developed in the other. If, in place of the riband coil, which received the induction in the last experiment, there be substituted a coil formed of fifteen hundred yards of fine covered wire, an induced current of intensity will be produced, or such as gives pungent shocks. With a single battery, these effects only are exhibited at the ending of the primary current; but if a compound battery of fifteen or twenty pairs be used, the same results are obtained at the moment of beginning of the battery current. It is, however, a remarkable fact, that with a galvanometer, the quantity of induction, in all cases, appears to be the same at the completion and interruption of the primary circuit. 8. The induction of a secondary current may be produced at a considerable dis-

tance, by coiling a long riband conductor into the form of a hoop, three or four feet in diameter, and placing opposite to this a coil of long wire. In this way shocks may be given through the partition walls of two adjoining rooms, when the hoop is suspended on one side, and the long wire coil brought opposite to it on the other. 9. The interposed substance in the last experiment, must consist of some non-conducting material; for if between the two coils a plate of metal be placed, the shock is entirely neutralized; and also, surprising to say, the same result is produced, but less perfectly, if the plate be placed, not between the coils, but on the outside of one of them. This result is shown to be due to an induced current in the plate, which by its adverse induction, neutralizes the current in the coil. 10. *Currents of different orders.*—Although the secondary current we have been describing consists of merely a wave, enduring but for a moment at the beginning and ending of the primary current, yet it can also produce an induced current, and this in its turn another, and so on. The direction of these currents of the different orders as indicated by the polarity given to a needle in a small coil forming part of the conducting circuit, is as follows:

	At the beginning.	At the ending.
Primary current,	-|-	-|-
Secondary current,	—	-|-
Current of the third order	-|-	—
Current of the fourth order,	—	-|-
Current of the fifth order,	-|-	—

"From the foregoing table, it ought to be supposed that each succeeding induction consists of a single wave, in the direction indicated by the magnetization of the needle; but this is not the case. The second induced current, for example, at the beginning of the battery current, does indeed consist of a single wave; but since an induced current is produced, at the ending, as well as at the beginning of the inducing current, it follows that the current of the third order must consist principally of two waves, which may be represented by -|-—; and since each of these will produce in turn two induced waves, the current of the fourth order must be formed of four waves — -|- -|- —, and for the same reason the current of the fifth order must consist of eight waves and so on. The first wave in each series is the most intense and hence the magnetic character of the needle is determined by this. Professor Henry has succeeded in referring all these phenomena of galvanic induction to the principle which he has adopted for the explanation of the dynamic

induction of ordinary electricity. If we suppose, in the case of a galvanic current, a constant addition of free electricity to one end of the conducting wire, and a constant subtraction of natural electricity from the other, the first end will be *plus*, and the other *minus*, and if, while the wire is in this state, a parallel wire is made to approach it there, according to the laws of statical induction, during the advance of the secondary wire, an induced current of the natural electricity of the wire should be produced in an opposite direction to that of the battery current. When the motion ceases the current must cease. And although the wire is in a state of unusual equilibrium, which may be readily represented by a diagram, it exhibits no signs of excitement so long as the battery current remains the same and the wire is immovable; but if the second wire be drawn back, then its electricity must return to its normal state, and thus an opposite induced current be produced.

"Under the head of galvanic induction we may mention the receat discovery of Dr. Faraday, of the statical inductive influence of magnetism and galvanism on the solid and liquid substances. He divides all bodies belonging to these two states into two classes; one of which is affected by magnetism after the manner of iron, and is called the magnetic class, and the other which is differently affected is denominated the diamagnetic class. When bars of the first class are freely suspended between the legs of a powerful horseshoe magnet, they arrange thomselves, as is well known, in a line passing through the two poles; but when bars of the second class are similarly suspended, they turn into a position at right angles to the same line. Dr. Faraday also finds that a powerful galvanic current passed in a coil around a bar of almost any transparent substance, such as glass, induces on the body a change of molecular arrangement, which is exhibited in the twist given to the plane of polarization of a beam of polarized light transmitted through the substance. The same effect may also be produced by placing the transparent bar between the poles of a powerful magnet. Connected with these indications there is an interesting fact first noticed a few years since by Dr. Page, of the Patent Office, and since studied by a number of persons, of the sound produced in a bar of iron at the magnetization, indicating a change in the molecular arrangement of the metal."

VII. *Animal Electricity.*—In this branch of the subject, the latest researches are so intimately connected with medicine that we offer no apology for the notice of them.

"The most important researches which have recently been made in reference to animal electricity are those of Matteucci, in Italy. The result of his labors conclusively proves, not that the contractions of the muscles are due to a current of electricity from the brain, but that in all living and recently killed animals there exists in the muscle itself a constant current. The general conclusion to which he has arrived in regard to these currents may be briefly stated as follows:— During the whole time the arterial blood is acting on the muscular fibre, a current of electricity is evolved which passes from the fibre to the blood, and thence to the surface, probably the facia of the muscles; or, in other words, the muscular fibre represents the zinc of an ordinary galvanic arrangement, the blood the exciting liquid, and the facia the copper or negative element. Indeed, the development of the electricity in the two cases appears to be due to the same cause, namely, the combination of an oxidizable substance with oxygen. We know the oxygen of the arterial blood acts on every part of the animal economy, and that every part of the organism is undergoing a process of change analagous to combustion, in which carbonic acid is developed, and heat extricated. The electricity in the one case is evolved by the burning of zinc in an acid, and in the other by burning the muscular fibre in arterial blood. For exhibiting these currents, a deep gash may be made transverse to the fibre of a muscle of a recently killed animal; and if one end of the wire of a delicate galvanometer be plunged into the bottom of the gash, care being taken not to touch the sides and the other end of the wire, brought in contact with the facia, the needle will be deflected. By using a series of positions of muscles of recently killed animals, we may form a compound battery; the muscular fibre of one piece being placed in contact with the facia or surface of the other, throughout the series. A pile formed in this way, of twelve or fifteen pieces of eels or muscles of pigeons produces a very marked effect on the galvanometer.

"*Effect of the Electrical Current on the Nerves.*—It is well known that the galvanic current transmitted along a nerve produces contraction in the muscle in which it terminates. According to Matteucci, there are two stages of vitality after the death of the animal, in which the current produces different effects. In the first of these, muscular contractions are produced both at the commencement and interruption of the galvanic current. In the second, they are observed in one case only, either at the beginning or ending of the current. In the case of mixed nerves, or those composed of bundles of nerves of sensation and motion, and which, consequently, have double roots, the contraction, when the current

is directed from the centre towards the extremities, is exhibited at the commencement of the current; but with the motor nerves, with a current in the same direction, the contraction is only exhibited at the ending of the current. When the current is in the opposite direction, the phenomena are reversed.

"Some of the researches of Matteucci have a bearing on medical electricity, and he has been led to conclude:—that the electrical current may be used with good success in the treatment of cases of paralysis either partial or total, and also of *tetanus;* but that in the therapeutical application of electricity, we should be careful not to continue the passage of the current too long, lest we augment the disease. The more intense the current the shorter should be its direction. When a current has passed for some time in the same direction through a nerve, paralysis of the nerve ensues; but the sensibility may be almost immediately restored, by passing the current in an opposite direction. In a case of paralysis of the nerve of motion, a current from the extremities to the centre is recommended; for paralysis of sensation, an opposite current must be employed. The most convenient instrument for the application of the electrical current for medical purposes is a single battery coil machine. Some of these instruments are so arranged as to give a series of currents in alternate directions, and others to produce a series of impulses all in the same direction."

When we commenced the above review it was our intention to have given an outline of the article we had selected from the work, whose title heads these pages; but we found, as we progressed, that to condense the already condensed account, would be but to omit portions equally as interesting as others retained. We, accordingly, have extended our notice, perhaps too far, but have to say, in conclusion, that as it now stands, it presents a tolerably perfect view of the present condition of electrical science, a department of physics now so intimate in its connections with medicine, that no medical man should be willing longer to acknowledge himself unacquainted with its principles. J. V. Z. B.

PART III.—BIBLIOGRAPHICAL NOTICES.

ARTICLE IX.

A Practical Treatise on the Diseases of Children. By D. Francis Condie, M.D., Secretary of the College of Physicians; Member of the American Philosophical Society; Honorary Member of the Philadelphia Medical Society, etc. Second Edition, Revised and Augmented. Philadelphia: Lea & Blanchard. 1847. 8vo, pp. 657. (From the Publishers. For sale by Joseph Keen, Jr., Chicago.)

The first edition of this work was published in 1844. It having been for three years before the public and adopted as a text book in many of our Medical Institutions, that it has passed to a second edition is good evidence that it is considered a work of value and authoritative on the subjects of which it professes to treat. In the present edition the author has revised the whole work, re-written portions and added such new matter as has been developed since the publication of the first edition. It is now a work that may be consulted with the certainty of obtaining the latest views of the diagnosis, pathology, and treatment of the diseases incident to infancy and childhood. J. V. Z. B.

ARTICLE X.

The Hand-Book of Human Anatomy, General, Special, and Topographical. Translated from the original German of Dr. Alfred Von Behr, and adapted to the use of the English Student. By John Birkett, Fellow of the Royal College of Surgeons of England, and Demonstrator of Anatomy at Gray's Hospital. Philadelphia: Lindsay & Blakiston. 1847. pp. 487. (From the Publishers.)

The small anatomical work with the above title, gives a

short and comprehensive detail of anatomical facts, and shows the relations which Anatomy bears to Physiology, Pathology, and Surgery. It is well adapted to serve either as an introduction to anatomy, or for refreshing the memory of practitioners, or students in the intervals between courses of lectures. H.

ARTICLE XI.

The Medical Students' Vade Mecum, or Manual of Examinations upon Anatomy, Physiology, Chemistry, Materia Medica, Surgery, Obstetrics, Practice of Medicine, (including Physical Diagnosis and Diseases of the Skin,) and Poisons. Second Edition, Revised and Enlarged. By GEORGE MENDENHALL, M.D., Lecturer on Pathology in the Medical Institute of Cincinnati, Member of the Philadelphia Medical Society, &c., &c. Philadelphia: Lindsay & Blakiston. 1847. pp. 574. (From the Publishers.)

The Medical Students' Vade Mecum is a work of very nearly the same character as the Hand Book of Anatomy. In the language of the author, "it is intended to furnish the student of medicine with a short and succinct view of the most important facts and principles which engage his attention during his pupilage, in order that he may refresh and fix more firmly upon his memory what he has read and heard." We unhesitatingly say, that we consider the work well adapted for the purpose for which it is intended. H.

ARTICLE XII.

Medical Botany, or Descriptions of the more important Plants used in Medicine, with their History, Properties, and Mode of Administration. By R. EGLESFIELD GRIFFITH, M.D., Mem-

ber of the American Philosophical Society; of the Academy of Natural Sciences of Philadelphia, etc., etc.; with upwards of three hundred illustrations. Philadelphia: Lea & Blanchard. 1847. 8vo., pp. 704. (From the Publishers, and for sale by Joseph Keen, Jr., Chicago.)

This is a work which will be greeted with much pleasure by all who may obtain possession of it. It is by far the most comprehensive and complete work upon the subject which has issued from the American press. It indeed fills a great vacancy in the medical literature of the country. This subject—Medical Botany—has been but too much neglected in this country, both by students and practitioners; and we think the cause has been, in a measure, the want of a good text-book or work of reference upon the subject. In our works upon materia medica, no reference is had, in their arrangement, to botanic classification, and hence they afford no aid to this important study, further than the *isolated* description of plants used in medicine. The book before us supplies all the wants of the professions in this regard, and we recommend it to them as all they could desire in a work upon this subject. The introdution is a brief comprehensive essay on the structure and composition of plants. "A Glossary of Terms," and a "Conspectus of the natural order of plants containing Medical Substances," materially add to the value of the work. An "Index of the common and foreign names of species and of vegetable products," and another of "Orders, Genera, and Species, with their Synonymes," afford great facilities for reference. The illustrations are copious, and excellent in design and execution. For mechanical execution, the name of the well-known house who publish the work will afford sufficient guarantee.

J. V. Z. B.

ARTICLE XIII.

A Practical Treatise on Inflammation, Ulceration, and Induration of the Neck of the Uterus, with Remarks on Leucorrhœa and Prolapsus Uteri, as Symptoms of Uterine Disease. By James Henry Bennett, M.D., Licentiate of the Royal College of Physicians, &c., &c. Philadelphia: Lea & Blanchard. 1847. pp. 146. (From the Publishers, by Joseph Keen, Chicago.)

Nothing could be more opportune than this little work of Dr. Bennet; for if, as he states, English practitioners seem unconscious of the existence of the diseases of which he treats, not only is this true of America, but the symptoms they produce are generally taken for independent diseases, and treated by mechanical means alone. Charlatanism, taking advantage of this popular opinion, both in and out of the profession, has found its interest in inventing pessaries, supporters, and bandages of all sorts, and patients treated by these are frequently for years affected with nervous and hysterical affections, who might once have been cured by appropriate treatment. On every account this book is to be recommended—the subject, the size, the matter, and the manner are all good. We propose in our next to give a very full analysis of its contents. D. B.

ARTICLE XIV.

The Half-Yearly Abstract of the Medical Sciences, &c., &c. Edited by W. H. Ranking, M.D., Cantab., Physician to Suffolk General Hospital. Assisted by W. A. Guy, M.D., George Day, M.D., Henry Ancel, M.D., and W. Kirkes, M.D. No. 5, from January to July, 1847. Lindsay & Blakiston, Philadelphia, &c. (In Exchange.)

This deservedly popular work fully sustains its former re-

putation in this number. It is a full and interesting abstract of what is new in the different departments of our science. As a work of reference it is exceedingly convenient and valuable on account of the admirable arrangement of its contents, and the clear and full accounts given of the many improvements and discoveries which are being made during each succeeding six months. This number contains 364 pages, finely printed and well executed. It is afforded at the low price of $1 50 per annum. E.

ARTICLE XV.

The American Journal of the Medical Sciences. Edited by Isaac Hays, M.D., Surgeon to Will's Hospital, &c. April 1847. (In Exchange.)

The American Journal of the Medical Sciences may, without disparagement to any other, be said to stand at the head of American Medical Journals, being the oldest and certainly one of the very best. Under the head of original communications it contains articles from eminent members of the profession in every part of this country. Its reviews and bibliographical notices are numerous and impartial, and under the heads of Foreign and Domestic Summaries it sums up with great care whatever is new and valuable in periodical medical literature. The tone of the work, from its first commencement to the present time, has been uniformly elevated, dignified and courteous. In this respect we think its influence has been highly favourable upon the entire profession. We would recommend it to any physician. D. B.

ARTICLE XVI.

The Medico-Chirurgical Review and Journal of Practical Medicine. January, 1847. New York: Republished by R. and G. S. Wood. (In Exchange.)

This work, which has for so many years held a rank among the highest critical authorities, still retains its high character and interest, and furnishes in itself so perfect an analysis of current medical literature, as to render unnecessary, in many instances, a reference to the works reviewed. The republication, as will be seen, is continued by the Messrs. Woods, in New York. D. B.

PART IV.—SELECTIONS.

1. *Claims of the Public upon Professional Benevolence.*—A woman in labor, at Birkenhead, England, applied to two medical practitioners to attend her, who declined undertaking the case gratuitously. One of them subsequently consented to act on promise of payment, and on finding that the case was a difficult one, procured also the assistance of another practitioner, by whom the woman was delivered. She died in a few days. A coroner's jury was convened, who expressed "their regret that more prompt and efficient aid was not rendered by the medical men in attendance on the deceased;" at the same time "they begged to thank Mr. S. for his prompt attention to the deceased when called upon." The gentleman who consented to take charge of the case, called in the evening and again in the morning after delivery but not receiving the promised payment, declined further attendance. Our respected cotemporary, the Prov. Med. and Surg. Journal, (Wedesday, April 7th, 1847,) has some remarks upon the verdict in this case so just, and as we think, so necessary to be held in remembrance as guides both to the practitioner and the public, that we feel bound to reproduce them.—*Annalist.*

"The poor woman, it seems, fell a victim to the consequences of a natural process, requiring the assistance of a professional man, not on the moment, be it observed, but of the necessity for which she and her friends must have been cognizant for months, and yet no provision for obtaining such assistance is made beforehand, and the medical man, whose time is his estate, and his exercise of his professional calling his means of subsistance, is expected to *give* that relief immediately when demanded, and censured by the public for non-compliance. We should be glad to know on what grounds, as far as the public is concerned, he is answerable to the demand on his time, or amenable to the reproof so liberally bestowed? Why is he to be publicly reproved for not bestowing his guineas in the exercise of his calling, any more than any individual juryman, or other person, who might have the means at his disposal, for not himself handing out the fee, and thus bespeaking and requiting the service performed Let the circumstances of the case be changed, and others, unhappily in this day, of greater frequency, substituted, and let the inquest be supposed for one moment, to have been into the cause of death of an individual, or a family, who may unfortunately have fallen a sacrifice to want of the common necessaries of life; would

the jury venture to record a regret that more prompt and efficient aid had not been rendered by any baker or other provision dealer, at whose hands relief might have been sought? or would the account have been headed in a public newspaper, "Alleged misconduct of the provision merchants of Birkenhead," or of Liverpool, or of any other place in which the unhappy event might have occurred? Would they not rather have lamented that the parochial or borough authorities—that is, the public authorities—the authorities to the support of which the public contributes, and over the efficiency of which they have the right of control, had not been more vigilant in the discharge of the duties assigned them? We deny altogether the right of juries thus to censure the conduct of private individuals, or to dictate the scale on which their benevolence should be exercised, and we greatly question whether there was one individual in the court then present, the medical men excepted, who would not have resented the being called out of bed to give hours of attendance in a case requiring assistance, for which previous provision should have been made, to say nothing of contributing his guinea, or the equivalent of it on the spot. It is true we find them liberal of their thanks to Mr. Stevenson, for the gratuitous exercise of his professional skill and attention on the occasion, but no expression of willingness to contribute any portion of their substance towards sharing with Mr. Stevenson the work of benevolence to which he had been devoting his valuable time and professional skill.

Once more we are desirous that the tenor and intent of the preceding observations should not be misunderstood. God forbid that the time should ever arrive when the medical profession is not open, heart and hand, to the call of the afflicted, and willing to afford with genuine disinterestedness, all the aid and consolation—professional or otherwise—in their power, to any one who may ask it; but let not the public claim *as a right* from medical practitioners that professional assistance which it is the duty of the public themselves to see shall be provided for those who stand in need of it, and for which it is equally the duty of the public to see that the professional man who renders it is equitably and liberally remunerated."

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2. *The Connecticut Legislature*, we are told, have passed a resolution declaring that Dr. Horace Wells, of Hartford, was the original discoverer of the inhalation of ether for surgical purposes. In a paper in the Boston Jour., Jan. 30th, entitled "A Review of Dr. M. Gay's Statement of Dr. C. T. Jackson's Claims, &c." by J. B. S. Jackson, M.D., of Boston, it is acknowledged that Dr. W., in Nov., 1844, did use the sulph.

eth., but abandoned it for the nitrous oxide, but this was two years subsequently to a conversation of Dr. C. T. J., with a Mr. Bemis and others on the subject of etherial inhalation. Even if established, as it seems to be, Dr. Wells' claim amounts to very little; and we advise him to abandon it for the future, and be content with the credit of good intentions. By *his* means, certainly, ether would never have come into general use. Mr. Morton's claims to any *discovery in this matter*, are satisfactorily shown to be wholly null and void. What pleases us most, is that the author of the article in the Journal says that Dr. J. "signed the petition for the patent in an unfortunate moment, and for legal reasons alone—that he deeply regrets ever having had anything to do with the patent"—so do we—that "he has never received any pecuniary advantage from it and never will," and that he has destroyed the bond given to him, and according to which Mr. M. was to have paid him a certain per centage of the profits which might be derived from the sale of the patent right. This is as it should be, and we honor Dr. Jackson for the course he has taken. The man who confesses and repents of a fault, has made for it the only reparation in his power, and deserves to be forgiven. We hope that such may be the end of every attempt at the violation of professional decorm, if such must be made: and that it may be long ere we have occasion to chronicle such another confession and recantation on the part of a man of so high standing in the scientific ranks of his countrymen. Mr. Morton the speculative adopter of other men's ideas, shorn of the falsely claimed honor of discovery, and disappointed of gain in the supply of all the world with the "patent" "compound" "letheon," stands alone in his glory! and there we leave him!—*Annalist.*

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3. *Case of Ovariotomy:* By Mr. Bainbrigge.—The subject of this case was a lady, aged 31, who consulted Mr. Bainbrigge for a large tumor in the abdomen, and another which projected from the vagina, both yielding a distinct sense of fluctuation. The symptoms and history at once decided Mr. Bainbrigge to consider it a large unilocular cyst protruding in the two directions above mentioned.

After consultation with Sir C. Clarke, the patient was tapped by Sir B. Brodie, with evident advantage to her general health; but both tumors soon refilled.

In order to conceal the deformity, the lady adopted the strange expedient of compressing the abdomen by means of a piece of wood placed on the abdomen, and secured with a bandage. As a consequence probably, of the treatment the cyst ruptured, and general peritonitis ensued. From this,

hewever, she recovered, and it was then found that the dropsical tumor had entirely disappeared.

It now happened that a tumor exhibited itself on the opposite side, in its commencement and progress, similar to the previous one, with the exception that there was no protrusion of the sac per vaginam. The patient being anxious for something to be done, and having heard of the operation for ovariotomy, Mr. Bainbrigge yielded to her request but performed an operation which was modified as follows:

An incision was made through the abdominal parietes, about three inches in length, a portion of the cyst was drawn out, the contents were evacuated, with the precaution against the escape of any into the peritoneal cavity; a portion of the cyst was then removed, its edges fixed to the outer wound in the abdominal parieties, and the cyst allowed to assume a suppurative action, in the hopes that it would finally contract and disappear. These hopes were not disappointed, for on the fifth day the discharge became purulent, and was maintained such by stimulating injections. In about three months the discharge was greatly diminished, and her general health was completely restored.

[In reporting this case as a successful cure of ovariotomy the reader's attention must be called to the important modification adopted by Mr. Bainbrigge, one which he subsequently (Jan. 18) shows to be warranted by the result of former operations of the same kind. Neither is the incision of such a length as to be in itself formidable, nor is there any necessity for the rough handling of the interior of the abdomen, which must almost necessarily excite inflammation in the ordinary method of excision.]—*Prov. Med. Jour. in Ranking's Abstract.*

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4. *Spontaneous Evolution.*—At a meeting of the Obstetrical Society of Edinburgh, at which a discussion followed the narration of some cases of spontaneous cephalic and pelvic evolution, Dr. Simpson gave the following general deductions respecting the process. He observed—1st. That spontaneous evolution in transverse presentations was not so rare as some authors averred, and that it would probably occur oftener if timely assistance were not profferred. 2d. That under some circumstances arm and shoulder cases should probably be left to be expelled by the mechanism of spontaneous evolution, assisting, if necessary, this mechanism by art. 3d. That this ought to be our practice if, in an arm or shoulder case, the chest and trunk of the child be already thrust down into the cavity of the pelvis; for to turn under such a complication, and with that object, attempt to push back the body of the child into the cavity of the

contracted uterus, would risk a rupture of its coats. 4th. That if the process of spontaneous evolution fails, two operations have been recommended to effect delivery, viz.: evisceration and decapitation. 5th. That evisceration is only applicable to cases of *pelvic* spontaneous evolution demanding operative interference; and decapitation is only applicable to *cephalic* spontaneous evolution. 6th. That in all common transverse presentations, seen before the body and bulk of the infant is doubled and thrust into the cavity of the pelvis *turning* is the proper practice. 7th. That a child of common size would never, in a transverse presentation, be thrust into the cavity of the pelvis, unless the pelvis were large in its dimensions; and hence, when the process of spontaneous evolution is found in an advanced stage, it is almost a certain sign that the pelvis is of such a size as to give a chance of its completion.—*Month. Jour., ibid.*

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5. *Human Tripod.*—A malformed child, so called from its presenting the appearance of three legs, is described and figured in the last volume of the "Medico-Chirurgical Transactions," by Mr. Acton. The child is represented as being lively and healthy, and perfectly formed above the umbilicus. Below this point, and to the right and left of the mesial line are two distinct penes, of normal direction and size. Each is provided with a scrotum, the outer half of each containing a testicle. Between and behind the legs is seen another limb, or rather two limbs united together throughout their entire length. The anus occupies its usual situation, and the functions of the bowels are duly performed. Below this the the thigh of the compound limb equals in size the buttocks of a young child. Urine passed at the same time from both penes. Mr. Acton mooted the question of the removal of this supplementary limb, which he considered a feasible operation.—*Medico-Chirurg. Trans.*, vol. xxix., *ibid.*

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6. *Professor Simpson's Essay.*—III. *Artificial Separation of the Placenta.*—The arrestment of unavoidable flooding by total detachment of the placenta should, I believe, be our line of practice when the combination of circumstances is as follows, viz.: the hemorrhage is so great as to show the necessity of interference, and is not restrainable or restrained by milder measures (such as the evacuation of the liquor amnii); but at the same time, turning or any other mode of immediate and forcible delivery of the child, is especially hazardous or impracticable, in consequence of the undilated or undeveloped state of the os uteri, the contraction of the pelvic passage, &c. Or, again, the death, prematurity, or non-viability of the infant may not require us to adopt modes

of delivery, for its sake, that are accompanied (as turning is) with much peril to the mother, provided we have a simpler and safer means, such as the detachment of the placenta, for at once commanding and restraining the hemorrhage, and guarding the life of the parent against the dangers of its continuance. Hence as I have elsewhere stated, I believe that the suppression of the flooding by the total detachment of the placenta will be found the proper line of practice in severe cases of unavoidable hemorrhage, complicatad with an os uteri so insufficiently dilated and undilatable as not to allow of version being performed with perfect safety to the mother;—therefore, in most primiparæ; in many cases in which placental presentations are (as very often happens) connected with premature labor and imperfect development of the cervix and os uteri; in labors supervening earlier than the seventh month; when the uterus is too contracted to allow of turning; when the pelvis or passages of the mother are organically contracted; when the child is dead; when it is premature and not viable; and where the mother is in such an extreme state of exhaustion as to be unable, without immediate peril of life, to be submitted to the shock and dangers of turning or forcible delivery of the infant. This enumeration is far from comprehending all the forms of placental presentations that are met with in practice; but it certainly includes a considerable proportion of the cases of this obstetric complication, and among all or almost all of the most dangerous and most difficult varieties of unavoidable hemorrhage. In adopting the practice, one error, which I would strongly protest against, has been committed in some instance. Besides completely detaching and extracting the placenta, the child has subsequently been extracted by direct operative interference. If the hemorrhage ceases, as it usually does, upon the placenta being completely separated, the expulsion of the child should be subsequently left to nature, unless it present preternaturally, or the labor afterwards show any kind of complication, which of itself would require operative interference under any other circumstances. Both to detach the placenta and extract the child would be hazarding a double instead of a single operation."—*Ibid.*

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7. *Quinine in Coffee.*—A Parisian medical student, M. des Veuves, has been recommending the administration of quinine in an infusion of coffee, as the best means of concealing its bitterness, and as not impairing its medicinal powers. There is a warm discussion as to whether this is a discovery. It appears, however, not to be new but that the young man has the honor of having directed the attention of the medical

faculty in Paris to this useful mode of giving quinine, which had been almost entirely overlooked. It is worthy of a trial in this country.—*Lond. Lancet* in *Bost. Med. and Surg. Jour.*

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8. *A Case of Injury of the Eye.* By Chs. W. Stephens, M.D., St. Louis.—*April* 15—Mr. Newell a clerk in a drug store, in combining eight ounces of sulphuric acid with two ounces of Indigo, imprudently corked the bottle containg the ingredients, and upon effervescence taking place, the cork was forced out, and the contents received upon the face and into the eyes of the gentleman.

Dr. Jackson and myself visited him in about ten minutes after the accident, and, at the suggestion of the doctor, rubbed the face with the calcined magnesia, at the same time raising the lids, deposited small quantities upon the globe of the eye. The effect of this application was immediately to neutralize the acid, forming the sulphate of magnesia, which is inert. High inflammation immediately supervened, of conjunctivæ and of the whole face; applied a mixtnre of the cal. magnesia with olive oil, and poultices of slippery elm; the inflammation soon began to subside, and we directed an astringent collyrium. He is now (May 10) able to attend to his usual business, suffering, however, a good deal from an inversion of the eye-lashes, *trichiasis*, which I find it necessary to remove from time to time; the lower lachrymal duct is entirely obliterated.—*Missouri Med. and Surg. Jour.*

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9. *Quackery and the Newspaper Press.*—In Scotland the presses are beginning, in real earnest, to oppose the vile system of quack medicines and quack advertisements. Articles have been forwarded to us from Chambers' Edinburgh Journal, the Scottish Reformers Gazette, the Glasgow Constitutional, the Fifeshire Journal, and other respectable newspapers, expressing their determined opposition to medical quackery in every shape. The Glasgow Constitutional tersely observes:—

"We have often been astonished that some journals, otherwise as respectable as their neighbors, should, for any trifling pecuniary advantage, place themselves in the position of *socii criminis* to a parcel of vagabond quacks.

"We consider the insertion of quack advertisements a most dangerous imposition, and the persons who give it as little better than the more daring criminal. The quack and his newspaper agent are as necessary to each other, in order to dupe the unwary with complete success, as is the receiver to the thief, being all in concert; and they divide the spoil wrung from the pallid hand of poverty, disease, and death."

Chambers' Edinburgh Journal, entering, as it does, the

homes of tens of thousands in every part of the empire, can do immense service to the anti-quackery cause. In Ireland, also, the anti-quackery feeling is alive. As we stated some weeks ago, the Nation is most vigorous and determined in its reprobation of quack medicines and advertisements. Side by side with this paper we must place the Dublin General Advertiser. We are sanguine in the hope, that the press which has so long been the strong hold of quackery, will now become an agent in its destruction. We contend that every qualified medical man should become an active propagandist of anti-quackery opinion, above all, should endeavor to influence the public press for the suppressing of the whole system.—*Lancet.*

The profession could do much to abate this monstrous evil, if they would exert the power they possess. Let them exert their influence in favor of those papers which refuse insertion to quack advertisements, and discountenance those which publish such advertisements, and the unholy alliance which now exists between quackery and the newspaper press would be broken up.—*Med. News.*

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10. *On the use of Quinine, &c.* By W. S. KING, M.D., U. S.A. (In a letter to the Editor.)

Fort Leavenworth, Feb. 20, 1847.

Dr. C. A. LEE—Sir:—In the New York Jour. Med. for November, 1846, favorable allusion is made to the practice of administering quinine in combination with a diaphoretic. Without being aware that this mode of giving quinine had been recommended or used by others, I have been in the habit of resorting to this combination for some time past, particularly during the past summer.

The novelty and excitement incident to the Santa Fe expedition, caused much anxiety among the sick here, lest their recovery should not be rapid enough to enable them to leave with their companies. The interests of the service also rendered it peculiarly desirable that the cures should be as prompt as possible. As a means of effecting the desirable object, quin. and sp. nitr. dul. (generally, however, with the addition of tinc. opii or tinc. opii comp.) was my usual and favorite prescription. This formula was used, in several hundred cases, of intermittent and remittent fevers, and, in almost every case, with happy effect. With opium, as an adjunct to the quinine and sp. nitr. dul., it will readily be conceived that the value of the prescription is increased, and is rendered capable of fulfilling a much greater number and variety of indications. It may then be employed in those cases of fever, where there is much restlessness and nervous excitement, and, by allaying pain, checking various symp-

toms, soothing and tranquilizing the patient's feelings, greatly contributes to his comfort and convalescence. The diaphoretic properties of the prescription are much increased by the addition of the opium. The power which this medicine possesses of restoring the equilibrium of the circulation and excitement, by determining to the surface, makes it particularly useful in the hot stages of fever, and enables you to use the quinine sooner than otherwise would be safe.

There are several advantages in this mode of giving quinine. 1st. There is a gain as to time, of twenty-four hours in intermittents, and in remittents, of perhaps several days, which would otherwise be lost in waiting (as recommended by good authority) for the apyrexial intervals, before exhibiting the quinine. 2. By tending to lessen and thereby shorten and speedily terminate the paroxysm of fever, you place the patient, in a short time, in a fair way to recover, and thus diminish the liability to complications which often occur, and in a great measure secure him from the consequences of accidental affections of a distressing and dangerous character. 3. To shorten the paroxysm of fever, and thus destroy the chain of morbid influences that surround the patient *before* strength and restorative powers of the system are weakened, are objects of the highest degree of importance, particularly so in broken down constitutions, or, in such as are feeble and exhausted by previous injurious influence. It needs no argument to show that any means calculated to promote these results must exert an influence highly curative.

I have been much pleased with the success attending this union of remedies, and believing it to be capable of fulfilling the indications I have pointed out, can cordially commend it to those who have not yet tried this method.

Not considering that the use of purgatives or other preparatory treatment was necessary in all cases, I have given the quinine and diaphoretic (with or without the opium according to circumstances) at once on the patient's reporting sick and have had no reason to regret it. By this plan the patient is exempted from the disagreeable and debilitating effects attending the exhibition of emetics and purgatives, which, in many cases may be happily dispensed with. The following formula answers very well in some cases, and where no irritability of the stomach exists, is often preferable to the one already mentioned:

℞.—Tinct. Opii Comp.
Sp. Nitr. Dul. aa. ʒj.
Vin. Antim. gtt. xx.
Solutio Sulphatis Quinæ ʒj.—ʒiij.
Fiat mist. Sumatur alternis horis.

The antimonial was generally omitted in my usual prescription which was similar to the above, with this exception. I do not pretend that in all cases of intermittent and remittent fever, this alone will answer, but that, in experimenting with remedies, or plans of cure, I have found that I could cure and return to duty a greater number of cases, and in a shorter time, by this than by any other medical treatment. I do not offer these considerations because I esteem them new, or worthy of special attention, but for the purpose of bringing the practice of using quinine in combination with various other substances, (which I believe has many advantages over the plan of giving it alone,) to the attention of the profession, with the hope that farther experience will lead to improved modes of exhibiting this article, that will be free from the objections now made by some to the use of this invaluable medicine.—*New York Jour. of Med.*

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11. *On the Effect of Blisters on the Young Subject.* By John B. Beck, M.D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of New York.

It has frequently struck me that a treatise, describing, with the necessary precision, the peculiarities of the effects of medicinal agents on the young subject, as distinguished from their effects on the adult has long been needed in our profession. As yet I know of no such work. The systems of Materia Medica, valuable and elaborate as they are and in which we should naturally look for the requisite information are confessedly deficient on this subject. The consequence is, that the young practitioner who depends upon them, finds himself continually embarrassed in the treatment of the diseases of children, and he is obliged, after all, to rely upon the incidental observations gathered from works on general practice, or upon the slow accumulation of his own observation. Even works professedly on the diseases of children do not supply the want. They indeed specify doses suitable to the age, and now and then give cautions in relation to the use of certain medicines, but they do not enter into the philosophy of the subject as it ought to be engaged upon. It is treated by them more as a matter of enlightened empiricism, than as one founded on sound and rational physiological and pathological principles. In some previous papers I have endeavored to offer some contributions on this subject and should they be the means of inducing some experienced hand properly to elaborate it, it appears to me that a greater practical benefit could not be conferred upon the profession.

On the present occasion I propose to make *Blisters* the subject of a few remarks.

The first peculiarity attending the operation of blisters on the young subject is, *that they produce their effects in a shorter time than they do in the adult.* This is a fact well known to every practitioner. While in the adult, they do not produce their effects until from eight to twelve or even more hours have elapsed, in the child the same takes place in from two to six hours. In this respect there is a striking difference between blisters and most other remedies. Emetics and cathartics for example, do not appear to act with any more rapidity on the child than they do on the adult. Now this fact, of the more prompt action of this class of agents, upon the child, although a simple one, is, nevertheless, one of great importance, and one which should be continually borne in mind. It has a practical bearing, not merely upon the mode of conducting the process of blistering in young subjects, but also upon the use of it in their various diseases.

The second peculiarity is, *that the local inflammation produced by a blister is greater in the young subject than in the adult.* The reason of this is obvious. In infancy, the skin is more delicate in structure, has greater vascularity, and a higher degree of sensibility; all circumstances favoring the development of greater inflammation. The local impression, accordingly, made by a blister, is not merely more rapidly developed in the young subject, but it is also more intense.

The third peculiarity is, that in young subjects *blisters are more apt to be followed by the injurious consequences of inflammation, such as ulceration, gangrene, and even death.* Numerous and melancholy instances of this are to be found on record. Dr. Ryan, speaking of the use of blisters in children, says, "I have seen a blister on the chest followed by sloughing, and an aperture form over the epigastrium, which exposed the subjacent viscera."* Dr. Thompson states that he "has seen gangrene and death follow the application of a blister on an infant."† Dr. North States that he has "twice known infants destroyed in consequence of the sloughing of blisters the progress of which could not be arrested."‡ Professor Chapman remarks, that in children a blister "sometimes induces gangrene, as I have witnessed in two or three instances."§ My friend, Dr. William C. Roberts, informs me that he has met with two cases in which children sank under the effects of blisters. Numerous other facts of a similar

* Manual of Midwifery, &c. By Michael Ryan, p. 746.

† Materia Medica. By Anthony Todd Thompson, M.D., vol. ii, p. 535.

‡ Practical Observations on the Convulsions of Infants. By John North, p. 202.

§ Elements of Therapeutics, &c., vol. ii, p. 28.

character might be adduced to show the disastrous effects which sometimes result from the application of blisters to children; and to the minds of many physicians it constitutes a serious objection to their use in their diseases. Dr. Armstrong says, "I have a great dread of the application of blisters to infants, on account of what is called the local and constitutional irritation."* Now these occurrences may and do take place also in the adult, but they are comparatively rare and only under very peculiar conditions of the system. In infants, on the contrary, they are by no means uncommon. In any child, however healthy, they may occur from the simple cause of their being left on too long. They are more likely to take place, however, in certain conditions of the system, or of the skin itself. Thus, for example, in cases where a child is greatly emaciated, or the constitution broken down from various causes, the inflammation of a blister is very apt to become unhealthy in its character, and to be followed by injurious consequences. Then, again, where the skin itself is in a diseased state, it is much more likely to happen than in the healthy conditions of that surface.

The fourth peculiarity is, *that the constitutional excitement produced by blisters is generally greater in young subjects than in the adult.* That this must necessarily be so is obvious. In all cases, the general excitement must be in proportion to the degree of local irritation and the sensibility of the patient's system. If so, the general vascular and nervous excitement produced in the child by a blister, must, as a matter of course, be greater than in the adult. So powerful, indeed is the impression thus made sometimes, that convulsions have been produced from this cause. Dr. North says: "I have frequently seen very severe paroxysms (of convulsions) brought on in consequence of their injudicious and unnecessary application."†

From the whole of the foregoing, it is evident that blisters are much more powerful in their agency upon the young subject than upon the adult. They operate with more rapidity—cause a greater degree of local irritation and constitutional excitement—and their operation is frequentiy followed by consequences which rarely occur in the adult.

If such be the case, it appears to me that some conclusions may be drawn, of no inconsiderable practical importance.

1. If blisters are more powerful in their action upon children than adults, then it would seem tc follow that they may be rendered more efficient as a means of cure in their diseases. And such appears to me to be really the fact. In

* Lectures, p. 362.

† Observations on the Convulsions of Infants. By J. North, p. 209.

all cases, where their revulsive agency is required, and where they are properly applied, it has struck me that more decided benefit has resulted from their use in children than in adults, and that, too, under circumstances as nearly similar as they well could be. Besides acting more powerfully the rapidity of their operation in children gives them a greater advantage in many cases. We all know that one of the great objections to a blister in the adult, sometimes at least, is the length of time which it takes to produce its effects. In a child this is in a great measure obviated, and we have in a blister not merely a powerful but a comparatively speedy counter-irritant. As remedial agents, therefore, in the diseases of children, it seems to me that they ought to hold a high rank. I am aware that, by some, an opinion entirely the reverse of this is entertained. Mr. North in his valuable work on the convulsions of infants, states that he thinks that except as stimulants in depressed states of the system, blisters are altogether objectionable in the diseases of children. As revulsives in cases of local inflammation, he regards them as having attained a character which they do not merit, and that in fact they do more harm than good. On this subject he says, "the period at which we apply blisters in local inflammatory affections is not to be forgotten. We first subdue the severity of the disease by other and appropriate remedies, and when it is upon its decline, when in all probability the unassisted powers of nature would successfully perform the remainder of the task, a blister is applied. The patient gets well, notwithstanding the additional pain thus inflicted; and the fortunate result of the case, which is really to be attributed to the measures previously employed, is said to be owing to the good effects of counter irritation, &c., and the blister gains a character to which, in point of fact, it has no claim."* Now all this may no doubt be true in some cases, but that it is so generally can hardly be be admitted. It should be recollected that in the treatment of local inflammations, blisters are only auxiliary remedies. Of themselves and alone, capable of doing but little, and yet, when co-operating with other agents, such as blood-letting, &c., exceedingly powerful and valuable. Every one knows that there are periods and conditions in the career of inflammatory complaints, when bleeding and other reducing remedies have been carried to the fullest extent deemed advisable, and yet sufficient disease may remain if not to destroy life, yet to render convalescence tedious, or to lay the foundation of subsequent chronic disease. This of course, it is all important to obviate. Now it is just under

* Observations on the Convulsions of Infants. By J. North, p. 205–6.

this condition of things that blisters come in with great effect, and frequently break up completely the remaining vestiges of disease; and in this way I look upon them as remedies acting with more power and efficiency in children even than in adults.

2. From the fact of blisters being such powerful agents and especially from the fact of their being so liable to be followed by dangerous consequences, more caution is required in their use in children than in adults. Important and valuable as they are and may be made, if properly used, their indiscriminate application cannot be too much reprobated. Just in proportion to the good they are capable of accomplishing under proper circumstances, is the evil which results from them, if heedlessly or injudiciously resorted to. It is to be feared that this is not always borne in mind as it should be. As a general rule, they should never be resorted to, especially in very young children, unless some decided benefit is anticipated from them.

3. The mode of conducting the process of blistering in a young subject is a matter of greater nicety, and should call for the utmost care on the part of the practitioner. As one of the principal causes of gangrene is leaving the blister on too long, this is a point that should be specially attended to. To many this may appear a small matter, but it is really one of great moment, and in relation to which I am sorry to say, that the directions given in many of our practical works are so discrepant as to be very poor, if any, guides to the young practitioner. By way of illustration, I will quote a few of them. Dr. Armstrong says, "from twelve to sixteen hours is generally sufficient for the application of the blister in adults, and half that period in children."* Dr. Williams says that, "to avoid gangrene in children, it is advisable never to allow the blister to remain on more than six hours."† Dr. Dewees states that "in children, the blister is frequently found to have performed its duty in eight hours, and very often in six. It should, therefore, always be examined at these periods, and dressed, if sufficiently drawn; if not, it should be suffered to remain until this takes place."‡ Evanson and Maunsell say, "In no instance is the blister to be left on more than a few hours (two to four)—not longer in fact, than until the skin is reddened, when vesication will follow; but this result should not be waited for, as attendants always will do, unless the most express directions to

* Lectures, &c. By John Armstrong, M.D., p. 362.

† Cyclopœdia of Practical Medicine. American Edition, vol. i, p. 259. Art.—Counter Irritation.

‡ Practice of Physic. By Wm. P. Dewees, M.D., p. 28.

the contrary be given."* Neligan directs that "as a general rule, in infants and young children, blisters should only be left on until redness of the surface is produced, when the application of a warm poultice to the part will cause vesication."† Ballard and Garrod remark, that in children a blister should not be allowed to remain on longer than to produce redness of the surface; and they add, "in very young infants, it has appeared to us doubtful whether even redness should be permitted to occur before its removal."‡ The foregoing is a sample of the discrepancy of opinion in relation to a most important point of practice, and one confessedly, too, not unfrequently involving the life of the young subject, as advanced by authors of the highest respectability and who may be supposed to exert a wide influence in guiding the practice of young beginners in our profession. The fact is, and this may account somewhat for the difference of opinion just noticed, that no positive rule can be laid down in relation to the precise time that a blister should be left on a young child. From the original differences in the sensibility of the skin in children, the period must necessarily vary, and the only safe general rule is to be governed by the actual effect produced. For this purpose the blistering plaster should be raised at suitable intervals, and the state of the skin observed. And the safe plan is, according to the directions of some of the authors quoted above, to remove the blister as soon as the surface appears uniformly red, and then to apply a soft poultice. In most cases this will be followed by a suitable vesication, while any injurious consequences will be averted.

It is not my intention in this paper to go into the minutiæ of conducting the process of blistering, but there is one other point which I cannot help noticing, and that is the practice which is so common with some, of covering the blistering plaster with dry fly-powder. Although intended to make the blister more potent, it frequently has a directly contrary effect, from the fact that the blister does not adhere so closely to the skin; over and over and over again have I seen blisters prepared in this way fail in producing the desired effect, although left on even longer than the usual period. Then, again, the dry powder is apt to adhere to the skin after the blister is removed, and in this way stranguary is more likely to be produced. In one case, according to Ure,

* A Practical Treatise on the Management and Diseases of Children. By R. T. Evanson, M.D., and H. Maunsell, M.D., p. 107.

† Medicines, their Uses and Mode of Administration. By J. W. Neligan, M.D. p. 202.

‡ Elements of Materia Medica and Therapeutics. By Ed Ballard, M.D., and A. B. Garrod, M.D., p. 457.

sphacelus has occurred from this cause.* As apothecaries are very apt to prepare blisters in this way, it is important that practitioners should be on their guard to prevent it. With regard to the dressing of a blister, always a matter of importance to the young subject, and frequently so to the adult, I would call the attention of the reader to a mode very recently recommended by Dr. Maclagan, of Scotland, which holds out many advantages over the ordinary method. After leaving the blister on for a suitable time, he applies a poultice of bread and milk for two hours. After discharging the serum, a thick layer of soft cotton wadding is applied over the part with the undressed or woolly surface next the skin. If, in the course of a few hours, this should become soaked with the serous discharge from the blister, so much of the cotton may be removed as can be done without disturbing the loose epidermis beneath, and the whole again covered with a dry layer of cotton. This is all the dressing which, in general is requisite. The cotton is allowed to stick to the skin of the blistered part, and when a fresh layer of epidermis is formed, which takes place very readily, the old epidermis and cotton come off together, leaving a smooth whole surface below.

The advantages of the above mode, according to Dr. M., are first, "that it renders the blister much less painful and annoying to the patient than when unguents are used. The tenderness, in fact, is comparatively so trifling, and the protection by the cotton so good," he says, "that I have been enabled, without annoyance to the patient, to percuss freely, and apply the stethoscope firmly over the blistered parts, which had been dressed for the first time only an hour or two previously; secondly, the blisters heal faster under it than under dressings with cerate; for, although the cotton may remain adhering for some days, I have generally found that within twelve hours the patient ceases to feel the blister a source of annoyance. Lastly, it dispenses with the greasy applications so disagreeable to patients of cleanly habits."†

4. To obtain the good and avoid the evil of blisters, it is evident that a nicer discrimination of the conditions of the system is necessary in the use of this class of agents in children than in adults. Long experience has established the fact, that it is only under certain states of the system that blisters can be used with any prospect of advantage. If this be true in the adult it is doubly so in the young subject, and any mistake in this respect is much more likely to

* A Practical Compendium of the Materia Medica, &c. By Alexander Ure, M.D p. 31.

† Edinburgh Monthly Journal of Medical Science, May, 1847, p. 834.

be followed by injurious consequences in the latter than in the former. Now the conditions which influence the effects of these agents are the state of the skin, and the state of the nervous and vascular systems. With regard to the skin, it may be laid down as a general rule, that when blisters are used as revulsives, the part to which they are applied should be as nearly as possible in a state of perfect health. In this state, the irritation of blistering may be established even in a child with comparative safety. On the contrary, when the skin is in a morbid state, ulceration and gangrene are by no means unusual occurrences. All this is occasionally illustrated in scarlatina and measles. Mr. Pereira mentions that he has seen "two instances of death from the gangrene caused by applying a blister after measles."* My friend Prof. Dunglison, in his valuable work on Materia Medica, states that he has seen "several cases of death manifestly caused by the use of blisters in scarlatina and measles."† Other facts of a similar character might be adduced, but the preceding are sufficient to show the tendency which there exists in this state of the skin to take on unhealthy inflammation. And the reason is to be sought for in the changed condition of the skin. During the febrile stage of these diseases the skin is preternaturally injected and excited. As soon as the fever subsides and the eruption recedes, the skin is left in a state of debility—a state in which as we all know, inflammation is very likely to terminate unfavorably. I hope it may not be inferred from the preceding that I mean to express the opinion that blisters ought never to be used in such cases as measles and scarlatina—but the possible occurrence of such consequences ought to make us exceedingly cautious about the manner of using them, and indeed ought to deter us from using them at all, unless under a manifest necessity. In every case, therefore, before applying blisters to young children, the coudition of the skin ought to be attended to.

With regard to the state of the system, this is even still more necessary to be inquired into. Indeed this is all important, if we hope to realize any of the expected benefits from these agents. Now there are two states of the system almost equally unpropitious to their use—and these just the reverse of each other. The first is that in whch high inflammatory excitement is present. That this is ufavorable to the legitimate operation of a blister as a revulsive, is obvious if we reflect a moment upon the effects of this agent. These are local irritation and general excitement. Now in all

* Materia Medica, vol. ii, p. 775. American Edition.

† Vol. ii, p. 119.

cases where an internal inflammation exists, the difficulty of resolving by any means will be proportioned to the degree of general excitement accompanying it. If a blister be applied where this general excitement is already very great, one of the necessary consequences will be to augment this so greatly as to counteract in a greater or less degree, according to circumstances, the beneficial effects of the blister as a revulsive. Under this condition of things, the internal inflammation will be aggravated instead of abated, in consequence of the increase of general excitement. Hence the fact has been generally observed that if blisters are applied in the early periods of inflammatory complaints, or before suitable evacuations have been resorted to, they frequently do more harm than good. They merely add fuel to the fire.

On the other hand, a state of great constitutional exhaustion, and emaciation is also unfavorable to their operation. The reason here, however, is that from the impaired state of the vital energies, the local inflammation of the blister may be followed by ulceration, gangrene, and death. In the use of blisters, therefore, both these extremes should be carefully avoided. With regard to the condition most propitious to their use, it is that in which the general excitement is rather below than above the natural standard. When this is the case, there is less danger from any increase of excitement, while the system is in the state most favorable to the transfer of irritations from one part to another. Now all this is applicable to the adult, and we can easily see how much more so it must be in the case of the irritable and sensitive infant.

5. In the use of blisters in children especial reference should be had to the peculiarities of their temperament and constitution. This is more important perhaps than it may at first sight appear. Every practioner must have observed the extreme suffering which adults sometimes undergo from the irritation of blisters, In nervous and irritable habits, I have myself seen a state of things thus induced, little short of phrenzy. In children of nervous temperaments, all this is much more likely to happen, and accordingly, greater caution should be exercised.

If the foregoing conclusions be founded in truth, they would seem at once to expose the impropriety of the practice of resorting to the use of blisters on every trifling occasion, in the management of the diseasss of children. There is an opinion prevalent—how it originated I do not know—that blisters are innocent remedies—if they do no good they can do no harm. Now this is unquestionably a great error, and productive of vast mischief. Independently of the unnecessary suffering which they may occasion, they sometimes

produce death by the manifest causes of ulceration and gangrene, while in others they insidiously aggravate the disease they were intended to relieve.

12. *Inhalation of Nitrous Oxide.*—E. E. Marcy, M.D., in the Boston Med. and Surg. Journal, reports the removal of a large schirrous testicle, without pain, under the influence of the nitrous oxide. The following extract shows his estimate of the agent.

The legislature of Connecticut has passed a vote of thanks to Dr. Horace Wells, of Hartford, for his great discovery, which consists in the use of "*Nitrous Oxide Gas or Ether in Surgical Operations.*"

"Another superiority which it possesses over the ether is, that its after effects are far less unpleasant—less headache, less lassitude, and less depression of the nervous system, always resulting from its use. Ether generally causes troublesome choking and cough; the gas scarcely ever. Ether is objectionable on account of the unpleasant smell which it communicates to the room; the gas possesses no disagreeable odor. Ether abstracts largely from the oxygen of the arterial blood, thus becoming a direct source of disease; the gas has no such effect. Ether gives rise to pains in the head, lassitude, impaired vital energy, and other symptoms indicating a serious depression of the nervous system; the gas rarely produces any of these effects, and if ever, only in a slight degree. In order to produce the full effect of the ether it is customary to reduce the patient to a state of stupor; the gas is capable of rendering the body entirely insensible to the pain of the most severe surgical operation, without putting the patient to sleep, or causing any stupor! We have often observed patients watch the progress of severe operations upon their own persons, with countenances as smiling and happy as if they were enjoying a delightful treat."

PART V.—EDITORIAL.

ARTICLE I.

ON THE ORGANIZATION OF THE MEDICAL PROFESSION.

While physicians complain of the want of discrimination exhibited by the public in relation to the qualifications of medical men, whereby the ignorant are enabled to gain an extensive practice, and the better qualified are compelled to languish in neglect, they seem, for the most part, to forget that in cases where their own influence is concerned they have done nothing to remove so great an evil, but rather have aided in its perpetration. We allude now especially to the election of medical professors and the bestowing of patronage upon the schools to which they are attached without requiring any certain or public proof of fitness for such stations. These, and the situations of surgeons and physicians to hospitals are, under our present arrangments, the highest positions in the profession to which we can aspire, and nothing seems more reasonable than that they should be offered as rewards for the successful cultivation of science, and be open to any aspirant to professional eminence. But instead of this what do we see? The appointing power to these places is, in the United States, vested in about thirty-seven corporate bodies composed mostly of non-medical men ignorant of what constitutes a good professor, and of the relative standing of the various candidates who may present themselve. The greater number of these bodies are directly connected with some religious denomination, and think themselves bound te act for its advancement. What would be thought of an ecclesiastial body dependent for their election upon a body of lawyers or doctors? How could teachers of law, judges of courts, or high officers of any kind be chosen by corporate bodies, yet neither of these things would be more absurb than the present method of choosing medical professors. Those who are to choose have no certain means of judging of qualification. Those who are to be chosen have no means of demonstrating their

ability to teach. Candidates find that to cultivate the acquaintance of influential individuals is a more successful method of succeeding than to spend time in prosecuting scientific researches. Sectarian influences frequently prevail, and those of a personal nature are never entirely excluded. The hopelessness of success prevents most persons from making application, and acts as a practical exclusion of the great mass of the profession. The method recently proposed of advertising for applications and keeping them secret, while it proves that necessity for change has been felt, is insufficient, as it does not enable a correct judgment of the qualifications of a candidate to be formed.

Whence comes this absurd system by which those most interested and most capable of judging, are the only ones excluded from a voice in the choice of professors? It is a remnant of a system of government inherited from another country and from a half barbarous age. While in later times the vivifying effect of liberal institutions has been shed upon the mass of the population exciting them to activity and ambition, while exclusive privileges have been abrogated as pernicious, while the various professors and teachers have been called upon to make rules for their own government, the medical profession in our own country has slumbered under the forms of a past century. With no common head, without means of communication among its different parts, without association or organization, what could be expected but that it should exhibit, as it does at the present moment, a perfect image of chaos.

To centralize, to harmonize, to bring the different parts into communication with each other, to stimulate to activity the great body of practitioners and interest them in the progress of science—such are the first and most urgent wants of the medical public. They have been generally felt, and the assembling of a national convention, and the organization of a national association is the first step towards their relief. The action of this association thus far has been judicious and its influence salutary. But it will be of little avail unless the interests of the entire profession shall be represented and its wishes expressed. It is for this reason that we earnestly call upon the physicians of the north west

to organize themselves into associations for improvement and to have their representatives at the next meeting in Baltimore, instructed to vote for all measures calculated to elevate the profession but especially to call upon medical schools to adopt some method by which the merits of candidates for teachers' chairs shall be fairly tested by public trials. It is especially to physicians of this region that we look for such action; as they are untrammelled by vicious forms and free to act for the public good without coming in conflict with long established interests.

It is not necessary for us to enumerate, at present, all the different beneficial effects likely to result from the adoption of this system, or to answer all the objections which might be urged against it. It has a merit which its opponents can not deny, and what is in itself sufficient to secure its triumph, it is a perfect security against the success of persons who are incompetent or who have been guilty of disgraceful conduct. If any still have doubts upon the subject let them look at the system of *concours* and its effects in France and they will be speedily removed.

Lest some might suppose, from our frequent recurrence to this subject, that we are unduly attached to this "one idea," we will say in addition, that we regard it as but one of several improvements necessary to the proper improvement of the profession. It is scarcely necessary to add that we have no personal interest or feeling on the subject except what springs from a wish to subserve the interests of mankind at large. As at present constituted, the medical organization might justly be compared to that of inferior animals, where separate ganglia, remotely connected by nervous cords, support a moderate degree of vitality independent of each other for which state of imperfect life, we desire to see substituted one in which there shall be a nervous centre, active communication and mutual dependence between the different parts; in a word, that perfect state of development in which modern society reflects the image of man himself. D. B.

ARTICLE II.

HYDRIODATE OF POTASH IN ACUTE HYDROCEPHALUS.

We have received a letter on the use of Hydriodate of Potash in Acute Hydrocephalus, from P. A. Allaire, M.D.

Dr. Allaire, is not a believer in the efficacy of this medicine and supports his views by showing the inconclusiveness of the cases cited in its favor. In addition to this method, by which he very successfully shows that the evidence thus far adduced in its favor is not sufficient to establish its claims, our own experience has furnished us with two well-marked cases in which it entirely failed to produce the slightest effect. It is a disease of which the symptoms are often similated by gastric and intestinal irritation and prostration; and in this region, very often by "miasma," or the unknown cause of intermittent and remittent fever. Of this kind Dr. Allaire thinks were the cases of Dr. Thompson Mead, reported in the last number of our Journal, and he attributes their cure to the judicious treatment employed in addition to the Hyd. Potass. D. B.

ARTICLE III.

MEDICAL LIBRARY AND READING ROOM.

The Editors of this Journal and the faculty of Rush Medical College have established a reading room for the use of the profession and medical students. It is located in Chicago, opposite the Post Office, on Clark Street. All the principal medical journals published in this country, and a good library may be found there. Physicians and students from abroad are invited to call at this reading room, which will, at all times, be open to them without charge. D. B.

ARTICLE IV.

PRIVATE HOSPITAL FOR THE INSANE AT CHICAGO.

Dr. Edward Mead, late of St. Charles, Illinois, has resigned his place in the medical department of Illinois College, at Jacksonville, and removed to Chicago, for the purpose of opening a private hospital for the insane. For immediate use he had taken a private dwelling where the patients may receive better care than at their own homes, and already has several cases upon his hands which were so urgent as not to admit of delay in treatment.

He has procured, in the vicinity of the city, twenty acres of ground, favorably situated, upon which he will proceed to erect suitable buildings for permanent use. This will be ready for the reception of patients during the approaching autumn. There is no hospital for insane persons, in operation, within several hundred miles of Chicago, and none in any part of the United States not already filled to overflowing, so that the establishment of this seems a matter of urgent necessity.

Dr. Mead has devoted much attention to the subject, and will have such attendants for his patients as will ensure their good treatment and comfort. The terms, we hear, will be four dollars per week; or, with an especial attendant, ten dollars per week. D. B.

ARTICLE V.

ACCIDENTS BY LIGHTNING.

Injuries and deaths from lightning are of such frequent occurrence in this conntry as to render the subject worthy the attention of the profession. We hear of such cases occurring in different parts of the country every little while during the summer season, yet so few of them come under

the observation of any one individual, that but little has been collated upon the subject. We have several interesting cases, but they are not sufficient of themselves to afford data for any general conclusions. To enable us to investigate the subject, we solicit, from our professional brethren, detailed histories of all such cases coming within their knowledge, of which they have reliable information; and if a sufficient collection of facts is made we will give the result of the inquiries we make, in the Journal.

The circumstances under which injuries have been received, the extent and symptoms, together with a detailed account of the treatment pursued, and its results, will be thankfully recceived. E.

ARTICLE VI.

SELLING A PRACTICE.

Fashions in the mode of business amongst medical men, as in drapery amongst the people, varies in different districts of the country.

In New England physicians sell their practice; as concluded from the following advertisement in the Boston Med. and Surg. Jour., and other evidence:

"An elderly physician, in Worcester county, wishing to relinquish business, offers his practice, and a small amount of real estate, on liberal terms," &c.

In the western country, physicians would find *great difficulty*, if not in making out a bill of sale, at least in giving a clear and *indisputable* title in the transfer of their practice.

E.

ARTICLE VII.

ST. LOUIS MEDICAL AND SURGICAL JOURNAL.

Our Exchange bearing the above title, having completed its fourth volume, comes to us in a new and more beautiful dress and is hereafter to be issued every other month. The number before us (No. 1, Vol. V.) contains one hundred and four pages of interesting matter.

We hope it will find a justification of the additional pains with which it is got up, in a liberal extension of patronage.

E.

ARTICLE VIII.

RUSH MEDICAL COLLEGE.

Four years have not yet elapsed since this institution, under the greatest difficulties, was organized in Chicago, then containing about eight thousand inhabitants. The project of a medical school in so small a town was regarded by many as chimerical and premature, because they had no conception of the prosperity and growth that awaited it. It was thought there could be no facilities for teaching practical anatamoy and giving clinical instruction, which were in fact cogent reasons for doubting its success, as no school of medicine without them can properly teach these most important of all other branches of medical education.

But since, in the short space of time that has passed, the city has grown to number sixteen thousand inhabitants, and has established a hospital, (to which a lying-in department will be attached,) and a Dispensary; two charitable institutions for the treatment of the sick, to which students can have access, and in which regular instruction is given them by members of the faculty, it is conceded by all that Chicago is a most eligible site. And since the college has a commodious brick building, a library, extensive cabinets illustrating the several

branches of medicine and the collateral sciences, a good set of chemical apparatus, &c., which have been procured by persevering energy on the part of the faculty, with ample means for clinical instruction and an abundant supply of material for dissection, no one can doubt its success. And as the school has grown regularly and rapidly, keeping pace with improvements around it, its classes increasing with the increase of the means of instruction—the first, in the winter of 1843–4, numbering twenty-two, and the last, in 1846–7, but three years intervening, being seventy students, it must be considered a healthy growth.

The members of the faculty, with whom our readers have become somewhat acquainted through the Journal, being devoted to the profession and each to his particular branch, and being wedded in interest and inclination to the college, give a guaranty of its future onward course and its wide extended usefulness. E.

ARTICLE IX.

NEW WORK

ON OBSTETRICS AND THE DISEASES PECULIAR TO WOMEN AND CHILDREN.

Having in process of preparation for the press a work on the subjects designated above, which is intended to be a compendious system of facts for the student and practitioner, and being desirous of rendering it more particularly useful to those of the great west, I take this method of soliciting the physicians of the western country to communicate to me the results of their observations upon the modifications that the diseases peculiar to women and children present, as they occur in their respective districts. Valuable aid of this kind shall be properly accredited in the body of the work.

Jno. Evans.

ARTICLE X.

MEDICAL REFORM.

Professor Annan, of Lexington, Kentucky, a member of the late National Medical Convention, is out in the Western Lancet, against that body, in an article which has received the notice of many of our cotemporaries. The Annalist is particularly severe on it.

The sentiment that the community must be elevated before it is worth while for the physician to be educated thoroughly, because he will necessarily fall back to their level strikes us as most remarkable.

The objection to the recommendation of *Clinical Instruction*, because it is without the power of many of the schools to impart it, we think might bear on the teaching of many things universally regarded as important, with equal force, for many schools are quite defective. The following from a Philadelphia Journal is forcible and to the point:

"It is respectfully submitted that a school which proposes to educate *practitioners* of medicine, and cannot illustrate pathology with living cases, is bound either to close its doors or to announce that patients who employ its graduates must do so at their proper peril, regarding the title of doctor conferred by it as indicating no competency to treat disease."

But what surprises us most is that the editor of the Western Lancet should propose that Professor Annan's article gives the sentiments of the profession in the west. We are much mistaken if he is not. E.

ARTICLE XI.

MISCELLANEOUS INTELLIGENCE.

We observe by an advertisement that the chair of Theory and Practice, vacated by Professor Moorehead in the Medical College of Ohio, has been filled by the transfer to it of Professor Harrison from the chair of Materia Medica, &c., and the appointment of our cotemporary of the Western Lancet, L. M. Lawson, M.D., to the latter.

Samuel H. Dickson, M.D., of Charleston, S. C., has been the successful applicant for the vacant chair of Theory and Practice in the University of the city of New York. He is distinguished as a writer on Pathology and Therapeutics.

Professor Henry of Princeton, New Jersey, has been appointed to the chair of Chemistry in the University of Pennsylvania, vacated by the resignation of Dr. Hare.

E. Deming, M.D., has been appointed to the chair of Materia Medica in Indiana Medical College.

M. L. Knapp, M.D., has been appointed to the chair of Materia Medica in St. Louis University, vacated by the resignation of Professor Norwood.

The first graduating class of the Medical Department of the University of Buffalo, at its recent commencement, numbered seventeen students.

The yellow fever is prevailing to an alarming extent in New Orleans. It is worse, and commenced earlier in the season, than for a number of years past.

The ship fever has been very fatal for several months amongst the half-famished immigrants that are landing in crowds at all of our principal seaport towns, and at Montreal and Quebec in Canada. It is thought by many to be contagious. Those attending upon the sick have many of them been infected and died of the disease.

Two cases of small pox occurred at Indianapolis in June and July, but it spread no farther.

A physician in Georgia has discovered a process by which cotton, and we suppose all ligneous fibre, may be rendered incombustible at a very moderate expense. It does not destroy the texture of the cotton. E.

NOTICE TO READERS AND CORRESPONDENTS.

We have received original communications from Drs. McLean, J. E. McGirr, and A. W. Benton.

The following works have been received:

Observations on Aneurism and its Treatment by Compression. By O'Bryen Bellingham, M.D., Edin., Fellow of and Professor in the School of the Royal College of Surgeons in Ireland, etc., etc. London: John Churchill, Princes Street, Soho. 1847. pp. 181, 12 mo. (Arrived too late to be noticed.)

Hand Book of Human Anatomy, General, Special, and Topographical. Translated from the original German of Dr. Alfred Von Behr, and adapted to the use of the English Student, by John Birkett, Fellow of the Royal College of Surgeons of England, and Demonstrator of Anatomy at Gray's Hospital. Phila.: Lindsay and Blakiston. 1847. pp. 487, 12mo. (From the Publishers, for sale by Joseph Keen, Jr., Chicago.)

A Treatise on the Practice of Medicine. By George B. Wood, M.D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania, one of the Physicians to the Pennsylvania Hospital, one of the Authors of the Dispensary of the United States of America. In two vols. Philad.: Grigg, Elliot, & Co. 1847. vol. i, pp. 791, vol. ii, pp. 840, 8vo. (From the Publishers. For sale by A. H. & C. Burley, Chicago.)

Proceedings of National Medical Convention, held in New York May, 1846, and in Philadelphia May, 1847.

Some Account of the Letheon; or, Who is the Discoverer? By Edward Warren. Boston, 1847. Pamphlet.

Circular—Patent Letheon. Pamphlet.

Triumphs of "Young Physic," or Chrono-Thermal Facts. By Wm. Turner, Esq., A.M., M.D. New York. Pamphlet.

Annual Circular of the Medical Institution of Geneva College, Session of 1847.

Catalogue and Circular of the Albany Medical College, 1847.

Annual Announcement of Rush Medical College, Chicago, Ill., 1847.

Annual Announcement of the Medical Department of the St. Louis University, 1847.

The Harmony of Creation. An address delivered before the Medical Department of the Western Reserve College, Cleveland. By Rev. Elijah Burrows.

Catalogue of the Medical Department of the University of the State of Missouri, 1847.

Catalogue of the Trustees, Officers, and Students of the Indiana Medical College, Session of 1846-'47.

A Practical Treatise on the Diseases of Children. By D. Francis Condie, M.D., Secretary of the College of Physicians; Member of the American Philosophical Society; Honorary Member of the Philadelphia Medical Society, etc. Second Edition, Revised and Augmented. Philadelphia.: Lea & Blanchard. 1847. 8vo, pp. 657. (From the Publishers. For sale by Joseph Keen, Jr., Chicago.)

The Medical Students' Vade Mecum, or Manual of Examinations upon Anatomy, Physiology, Chemistry, Materia Medica, Surgery, Obstetrics, Practice of Medicine, (including Physical Diagnosis and Diseases of the Skin,) and Poisons. Second Edition, Revised and Enlarged. By George Mendenhall, M.D., Lecturer

on Pathology in the Medical Institute of Cincinnati; Member of the Philadelphia Medical Society. &c., &c. Philadelphia: Lindsay and Blakiston. 1847. pp. 574. (From the Publishers.)

Medical Botany; or Descriptions of the more important Plants used in Medicine, with their History, Properties, and Mode of Administration. By R. Eglesfield Griffith, M.D., Member of the American Philosophical Society; of the Academy of Natural Sciences of Philadelphia, etc., etc.; with upwards of three hundred illustrations. Philadelphia: Lea & Blanchard. 1847. 8vo., pp. 704. (From the Publishers, and for sale by Joseph Keen, Jr., Chicago.)

A Practical Treatise on Inflammation, Ulceration, and Induration of the Neck of the Uterus, with Remarks on Leucorrhœ and Prolapsus Uteri, as Symptoms of Uterine Disease. By James Henry Bennet, M.D., Licentiate of the Royal College of Physicians, &c., &c. Philadelphia: Lea & Blanchard. 1847. pp. 146. (From the Publishers, by Joseph Keen, Chicago.)

Poisonous Effects of Quinine. By W. O. Baldwin, M.D., of Montgomery, Alabama. Pamphlet.

We have received in exchange the following periodicals:

Ranking's Half-Yearly Abstract of the Medical Sciences.
The American Journal of the Medical Sciences.
The Medico-Chirurgical Review and Journal of Practical Medicine.
Braithwaite's Retrospect of Practical Medicine and Surgery. Part xiv.
New York Journal of Medicine, etc., New York.
The Annalist, a Record of Practical Medicine, New York.
New York Medical and Surgical Reporter, New York.
The Medical Examiner, etc., Philadelphia.
The Medical News and Library, Philadelphia.
The Western Journal of Medicine and Surgery, Louisville, Ky.
The Western Lancet and Medical Library, Lexington, Ky.
The Southern Medical and Surgical Journal, Augusta, Georgia.
The Boston Medical and Surgical Journal, Boston, Mass.
The Missouri Medical and Surgical Journal, St. Louis, Missouri.
The St. Louis Medical and Surgical Journal, St. Louis, Missouri.
The Practical Educator and Journal of Health, Boston.
Stockton and Co.'s Dental Intelligencer, Philadelphia.
Dublin Medical Gazette.

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COLLEGE OF PHYSICIANS AND SURGEONS
OF THE
UNIVERSITY OF THE STATE OF NEW YORK.

The Forty-First Session of the College will be commenced on Monday, 18th October, 1847, and continued until the second Thursday in March, 1848.

ALEXANDER H. STEVENS, M.D., President of the College and Emeritus Professor of Clinical Surgery.

JOSEPH M. SMITH, M.D., Professor of the Theory and Practice of Medicine and Clinical Medicine.

JOHN B. BECK, M.D., Prof. of Materia Medica and Medical Jurisprudence.

JOHN TORREY, M.D., L.L.D., Professor of Botany and Chemistry.

ROBERT WATTS, Jr., M.D., Professor of Anatomy.

WILLARD PARKER, M.D., Prof. of the Principles and practice of Surgery.

CHANDLER R. GILMAN, M.D., Professor of Obstetrics and Diseases of Women and Children.

ALONZO CLARK, M.D., Lecturer on Physiology and Pathology (including Microscopy).

GUSTAVUS A. SABINE, M.D., Demonstrator of Anatomy.

FEES—Matriculation Fee, $5; Fees for the full Course of Lectures, $105; Demonstrator's Ticket, $5; Graduation Fee, $25; Board, average $3 per week.

Clinical Instruction is given at the New York Hospital daily, by the Medical Officers, (Professor Smith being one of them,) fee $8 per annum; at the Eye Infirmary, without fee; and upwards of 1000 patients are annually exhibited to the class in the College Clinique. Obstetrical cases and subjects for Dissection are abundantly furnished through the respective departments.

The Annual Commencement is held on the second Thursday in March; there is also a Semi-annual Examination in September. The requisites for graduation are—21 years of age, three years of Study, including two full courses of Lectures, the last of which must have been attended in this College, and the presentation of a Thesis on some subject connected with Medical Science.

In addition to the regular Course, and not interfering with it, a course of Lectures will be commenced on Monday, 27th September, and continued until 18th October, viz.:—

Hygeine, - - - - -	by Dr. Smith.
Medical Botany, - - -	by Dr. Torrey.
Hernia, - - - - -	by Dr. Watts.
Treatment of Infantile Diseases,	by Dr. Gilman.
Physiology of the Blood, -	by Dr. Clark.

This Course will be free to the *Matriculated* Students of the College.

R. WATTS, Jun., Secretary to the Faculty.

College of Physicians and Surgeons,
67 Crosby Street, New York.

RUSH MEDICAL COLLEGE.
CHICAGO, ILLINOIS.

The Annual Course of Lectures of this Institution, for the session of 1847–8, will commence on the First Monday of November, and continue sixteen weeks.

DANIEL BRAINARD, M.D, President and Professor of Surgery.

JAMES V. Z. BLANEY, M.D., Professor of Chemistry and Pharmacy.

JOHN McLEAN, M.D., Professor of Materia Medica and Therapeutics.

W. B. HERRICK, M.D., Professor of Anatomy.

G. N. FITCH, M.D., Professor of Institutes and Practice.

JOHN EVANS, M.D., Prof. of Obstetrics and Diseases of Women and Children.

Ticket fee of each Professor, $10. Dissecting ticket, $5. Hospital ticket, $5. Matriculation ticket, $5. Graduation fee, $20. The Dissection and Hospital tickets are optional with the student to take or decline.

Good boarding, with room, fuel, lights and attendance, may be obtained, in Chicago, at from $1 50 to $2 50 per week.

For further information address

JAMES V. Z. BLANEY, M.D., Dean, Chicago, Ill.